



RenShape®
solutions

Product Data

RP 34 Powder, RP 37 Puffs, RP 38 Granules, RP 39 Grain, and RP 40 Shot

ALUMINUM-ALLOY FILLERS

DESCRIPTION: REN® RP34, RP37, RP38, RP39, and RP40 are aluminum-alloy fillers available in a variety of sizes. They are accessory products for use with REN® epoxy plastic tooling materials in the construction of various types of tools. By using these aluminum fillers, castings up to 12" thick may be poured. These fillers can decrease exotherm and reduce shrinkage.

APPLICATIONS:

RP 34 Powder This fine aluminum powder (particle size 15± microns) can be added to epoxy or polyurethane compounds. The addition of this filler will reduce shrinkage and peak exotherm temperature plus often improve physical properties and machinability.

RP 37 Puffs These aluminum puffs are an ideal filler for use in producing a vacuum chamber in a large vacuum form tool. We recommend a mixture of 25 to 50 parts RP 37 aluminum puffs to 1 part of mixed RP 4014R/RP 1500H system. Due to their size (3/8" to 1/2" diameter) they are very easily mixed or wet out. When used to fill a vacuum chamber or to back up a laminate for various tools, a high strength to weight ratio is achieved. Very little shrink or exotherm is experienced when used as recommended, and there is no limit as to the size or volume of the cavity that can be filled. Bulk density is 80 pounds per cubic foot.

RP 38 Granules These fine (145 mesh) aluminum granules can be used to back up epoxy and glass cloth laminates. If used with a low viscosity epoxy system, such as RP 4005/RP 1500H system, and 80% aluminum to 20% epoxy ratio is possible. RP 38 is also an ideal filler material when high impact and compressive strength are required in tools such as dies, compression molds, injection molds, etc. Bulk density is 68 pounds per cubic foot.

RP 39 Grain This filler is a mixture of various size aluminum-alloy particles. A mixture of 25 parts casting resin and 50 parts grain (by weight) provides a versatile, easy pouring material for mass casting. A mixture of 80 parts grain and 20 parts resin (by weight) makes an excellent backup for patterns when used behind a surface coat and several layers of glass cloth. Grain is excellent for developing a vacuum chamber in a small vacuum form tool. A mixture of 25 parts of RP 39 to 1 part of mixed RP 4014R/RP 1500H system is recommended.

RP 39 aluminum grain is also recommended for small vacuum form tools of 2 cubic feet or less. Bulk density is 94 pounds per cubic foot.

RP 40 Shot This aluminum shot consists of pellets averaging approximately 3/16 inch. The pellets are easily incorporated into casting systems such as RP 4036/RP 1511 in order to control exotherm and shrinkage. In some cases, thermal shock characteristics of molds can be improved by the addition of RP 40 shot.

SHELF LIFE: Provided material is stored under dry conditions in their original containers, they will remain useable for one year from date of shipping

SAFETY/HANDLING PRECAUTIONS: Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

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CAUTION! Avoid dusty conditions. Use with adequate ventilation.
Avoid breathing dust. In accord with good industrial practice, handle with due care.
Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling.
Nuisance dust may be generated when sanding or sawing cured material.

FIRST AID: In case of contact

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Eyes: Immediately flush with water for at least 15 minutes. Call a physician.

Ingestion: If conscious, give plenty of water to drink. Do not induce vomiting. Call a physician.

Inhalation: Remove to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Other: Referral to physician is recommended if there is any question about the seriousness of any injury.

PRECAUTIONARY NOTE: Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released varies significantly between systems. Additionally, ambient or compound temperature, amount of material mixed, and construction and shape of the mold or container can also be factors in the temperature profile of a mixed system.

In some cases, the thermosetting reaction can be vigorous, generating heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke.

A good rule of thumb is never mix more material than can be applied during the stated pot life or gel time. Also take care when using materials in applications other than stated on the Product Data Sheet, i.e., a laminating resin for casting.

Please feel welcome to call our Product Information Department or your local Vantico Inc. representative for instructions before you start your job.

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