While many recycling efforts are focused on encouraging consumers to recycle their end-of-life products, manufacturing and commercial facilities produce much larger quantities of recyclable steel. Empty steel paint and aerosol containers can be routinely recycled through these facilities. However, additional care is required for reject and return packages that are not yet empty.

Accumulate “reject” and “return” paint and aerosol cans

At paint and aerosol can-filling plants, some cans may be damaged, improperly filled or otherwise unsellable. Other cans simply may be outdated. Full and partially full “reject” and “return” aerosol cans, paint cans and pails once may have been disposed simply in a landfill. However, this is not an acceptable practice.

The environmentally responsible option is to empty the full and partially full cans or pails and manage the recovered contents with specialized safety equipment. Then recycle the empty steel containers themselves. While there are costs associated with purchasing, installing and operating specialized recycling equipment, manufacturers may balance such costs against the costs of special waste disposal or hazardous waste-management services.

Empty and flatten cans and pails to prepare for recycling

All “reject” and “return” paint cans and paint pails are taken to a collection area where they are emptied manually or mechanically. When emptying the paint cans and pails, paint will be collected in tanks or drums for reprocessing and recycling as new or specialty products. Other unsellable and off-specification paints may be blended together and donated to community improvement projects or charities. The remaining thin layer of paint on the inside of the containers must dry. While not necessary for recycling, flattening the emptied, dry paint cans and pails provides visual confirmation of emptiness and facilitates their storage and transportation.

The “reject” and “return” aerosol cans are degassed, decanted and flattened using specialty safety equipment for batch processing. Product residuals from industrial aerosol cans must be captured for appropriate disposal. Propellant gases will be typically captured and compressed for reuse or other disposition, such as flare-off or use as a fuel.
Recycle empty commercial aerosol cans and paint pails with other ferrous scrap

The plant or warehouse operator may negotiate arrangements with a local ferrous metal scrap dealer for recycling the emptied and flattened steel aerosol cans, paint cans and pails — along with other ferrous scrap materials that may be generated on-site. Often, scrap dealers provide and service a roll-off container for ferrous scrap. A scrap dealer may accept all ferrous scrap commingled or may require empty, flat aerosol cans, paint cans and pails to be segregated in another bin, perhaps at added cost. Depending on the actual volume, the operator may also bale the empty cans and pails into bales or mini-bales, with or without interim flattening. If this occurs, the recyclable steel material can be taken directly to a ferrous scrap dealer as ordinary steel metal scrap. In some rare cases, the material may even go directly to a local foundry or steel mill. Open communication with the scrap dealer is required to satisfy questions about paint and chemical residue. They can also provide practical assurance of the consistency and quality of the material supplied.

While many recycling efforts are focused on encouraging consumers to recycle their end-of-life products, manufacturing and commercial facilities produce much larger quantities of recyclable steel.

About steel can recycling

Steel food, paint and aerosol cans, along with steel lids and closures, are all continuously recyclable and are recycled into new steel products. Products included are new cans, automobiles, appliances, construction materials, tools and toys which rely on recycled steel to be manufactured.

Steel can end markets include steel mills and foundries. New steel is made with old steel, so all of today’s steel products contain a minimum of 25 percent recycled steel and are recyclable. The steel’s magnetic attraction allows steel cans, paint and otherwise, to be magnetically separated from other recyclables or from municipal solid waste consumed in a waste to energy plant. Steel cans are usually baled, although they may be flattened or shredded. Scrap dealers serve as secondary processors for steel cans. Steel scrap is a vital ingredient in making new steel; melting the scrap to make new steel is fundamental to energy and emissions savings and resource conservation.

About the Steel Recycling Institute

The Steel Recycling Institute (SRI), a unit of the American Iron and Steel Institute, educates the solid waste management industry, government, business and, ultimately, the consumer about the economic and environmental benefits of recycling steel. SRI works to ensure the continuing development of the steel recycling infrastructure.