



factsheet

Environment Matters

METAL INFORMATION SHEET

TYPES:

Steel is made from an ore, coking coal and limestone.

Iron ore is stripped in a blast furnace to reduce it to pig iron that can be used in steel production. Steel cans are often referred to as 'tins' as most steel cans have a fine layer of tin (0.00036mm thick) which protects the surface of the can.

Aluminium is produced from Bauxite, a clay like ore rich in aluminium compounds. Recycling aluminium requires only 5% of the CO₂ emissions as compared with primary production. Aluminium foil and cans are made of different alloys and must therefore be collected separately.

IF IT'S MAGNETIC, IT'S STEEL!

FACTS:

- Each household uses approximately 600 steel cans per year
- Recycling one tonne of steel cans saves 1.5 tonnes of iron, ore 0.5 tonnes of coal and 40% water usage
- All steel cans contain up to 25% recycled steel
- Recycling 1kg of aluminium saves up to 6kg of bauxite, 4kg of chemical products and 14kWh of electricity.



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- Recycling an aluminium can saves enough energy to run a television for 3 hours.

Advantages of recycling metals:

- It reduces the amount of waste in landfill
- It conserves non-renewable natural resources
- It saves energy

Metal recycling- Frequently Asked Questions

What metal does Charnwood accept?

Food and drink tins and cans, biscuit tins, cooking oil drums.

Should I remove the labels?

No, the recycling process will get rid of them.

Do I need to wash out my cans/tins?

Yes, we advise people to rinse their containers in used washing-up water.

Where do my metal containers go?

After being collected, your cans and tins go to Viridor's facilities where they are mechanically separated from the rest of recyclables, then separated between steel and aluminium before being sent to various places for recycling.

Recycling process: Steel

1. **Collecting** from can banks and kerbside collections

2. **Recycling**

- The steel cans are separated from other materials thanks to magnets



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- The cans are crushed and baled
- The bales are melted in furnace and molten iron is added. Oxygen is then blasted into the furnace which heats up to around 1700°C
- The molten steel is formed into big slabs which are then rolled into coils used for various steel products

3. **Can making:** The coils are used to make new cans

4. **Filling and selling:** The cans are cleaned before being filled and delivered to the retailer, ready for you to buy again!

Recycling process: Aluminium

1. **Collecting** from cans banks and kerbside collections

2. **Recycling**

- The cans are shredded by mechanical hammers
- The 'decoration' is then removed by blowing hot air
- The shreds are then melted at 750°C
- The molten metal flows into moulds and is cooled by jets of water. As it cools, the metal hardens and an 'ingot' is formed

3. **Rolling:** Ingots are pre-heated to 600°C, then rolled

4. **Can making:** The aluminium sheet is lubricated and fed through a cupping press to form the cans

5. **Filling and selling:** The cans are cleaned before being filled and delivered to the retailer, ready for you to buy again!



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End products

Bikes, cars, bridges, paper clips, or simply another food or drink can!

Links

www.alupro.org.uk

www.wasteonline.org.uk

www.thinkcans.com

www.recycle-more.co.uk

www.scrib.org

www.recycle-steel.org

If you require more information please contact:

Environmental Services, Charnwood Borough Council, Southfields,
Loughborough, LE11 2TN.

Tel: 01509 634563, E-mail: Cleaner.greener@charnwood.gov.uk

This information is available in different formats. To access these please phone (01509) 634560.

এ তথ্যাদি অন্যান্য মাধ্যমে পাওয়া যায়। এসব পেতে হলে দয়া করে (01509) 634560 এ নাম্বারে টেলিফোন করুন।

這資料具不同的格式，請致電 (01509) 634560 索取。

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