

Description

CAL®TR carbon is an agglomerated coal-based granular activated carbon specially designed for the purification and decolorization of many aqueous and organic liquids. CAL®TR is produced from select grades of bituminous coal using a highly developed and strictly controlled manufacturing process resulting in reliable and consistent product quality. This ensures a high purity product with an ideal porosity, which gives optimum kinetics for adsorption. CAL®TR is a unique agglomerated coal-based granular activated carbon that combines excellent adsorption kinetics with an effective trace removal capacity.

Recycling by Thermal Reactivation

Once granular activated carbon is saturated or the treatment objective is reached, it can be recycled by thermal reactivation for reuse. Reactivation involves treating the spent carbon in a high temperature reactivation furnace. During this treatment process, the undesirable organics on the carbon are thermally destroyed. Recycling by thermal reactivation is a highly technical process to ensure that spent carbon is returned to a reusable quality. Calgon Carbon operates some of the largest reactivation facilities in the world and recycles large quantities of spent carbon every day for a diverse range of customers.

Recycling activated carbon by thermal reactivation meets the environmental need to minimize waste, reduce CO₂ emissions, and lessens the use of the world's resources.

CAL®TR's high adsorption capacity enables continuous decolorization cycles to be carried out, after which the carbon can be thermally reactivated for repeated use avoiding waste disposal costs. Sweetening-off of spent granular carbons prior to

reactivation leads to valuable product recovery and significant savings in product loss. The combined high mechanical strength of CAL®TR with the transport pores gives the carbon excellent reactivation performance and low loss during reactivation.

Application

CAL®TR carbon was developed for applications where a combination of adsorption rate and trace removal capacity is needed. CAL®TR is best suited for a number of industrial applications:

- Glycerine purification
- Viscous organics decolorization/purification
- Solvents and organic solution purification
- Kerosene decolorization

Specifications

| | |
|--|------------------|
| Iodine Number | 1,100 mg/g (min) |
| Abrasion Number | 75 (min) |
| Moisture, as packed by weight | 2% (max) |
| Apparent Density | 0.54 g/cc (min) |
| Ash Weight | 5% (max) |
| Screen Size by weight, U.S. Sieve Series | |
| On 12 mesh 1.70 mm | 5% (max) |
| Through 40 mesh 0.425 mm | 4% (max) |

Features

| |
|-------------------------------------|
| Agglomerated coal based |
| Dedusted product |
| Uniformly activated carbon granules |
| High pore volume |

Benefits

| |
|--|
| High mechanical strength and uniform transport pore distribution, resulting in excellent reactivation performance and low attrition loss during handling. A consistent high-quality product. |
| Produced with virtually no fines or dust and is therefore particularly suitable for odor removal and purification of aqueous and organic liquids. |
| Combines excellent decolorization power with an effective trace removal capacity throughout the whole granule, not just on the outside. Excellent adsorption properties and constant adsorption kinetics in a wide range of applications. |
| This allows for a more efficient use of the carbon and results in a lower carbon dosage. |

CAL[®] TR

Agglomerated Coal Based Granular Activated Carbon



CALGON CARBON CORPORATION

Design Information

Design parameters for CAL[®]TR depend on the application in which it is used. The following are ranges of typical operating conditions:

- Empty bed contact time 60–240 min.
- Bed depth 3–30 ft.
- Linear velocity 0.25–2 gpm/ft²

The pressure drop per meter of bed depth for CAL[®]TR carbon is shown for different liquid viscosities. This data was obtained in downflow columns with a normal packing arrangement in which the carbon was pre-soaked in hot liquid and charged to the column as a slurry. The bed density (g/l) of the charged carbon was calculated to be 500 kg/m³.

Safety Message

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate sampling and work procedures for potentially low oxygen spaces should be followed, including all applicable Federal and State requirements.



CALGON CARBON CORPORATION

Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA USA 15230-0717
1-800-422-7266
Tel: 412-787-6700
Fx: 412-787-6713

Making Water and Air Safer and Cleaner

Chemviron Carbon
European Operations of
Calgon Carbon Corporation
Zoning Industriel C de Feluy
B-7181 Feluy, Belgium
Tel: + 32 (0) 64 51 18 11
Fx: + 32 (0) 64 54 15 91

Calgon Carbon Asia
65 Chulia Street
#37-03 OCBC Centre
Singapore 049513
Tel: +65 6 221 3500
Fx: +65 6 221 3554

Your local representative