

Product	<b>Sinopec Environmentally Friendly Engine Coolant YF-2A</b>
Summary	<b>Product description</b> Sinopec Environmentally Friendly Engine Coolant YF-2A is formulated using ethylene glycol and a balanced mixture of organic-acid based corrosion inhibitors. This environmentally friendly product contains no amines, borates, nitrites, phosphates or silicates, and is suitable for use as a coolant and antifreeze in the radiator systems of most types of internal combustion engines. This coolant is pre-mixed.

## Applications

Sinopec Environmentally Friendly Engine Coolant YF-2A is suitable for use in:

- Radiator systems of petrol, diesel, LPG and CNG-fuelled engines in most passenger cars, trucks and buses.
- Radiator systems of modern aluminium alloy engines.
- Radiator systems of diesel engines fitted with cast iron cylinder liners.

Caution: Sinopec Environmentally Friendly Engine Coolant YF-2A is *not* suitable for use in passenger cars and light commercial vehicles that have zinc or zinc-alloy type components in the cooling system, for example earlier models of Holden Commodore in Australia. It is, however, suitable for use in most passenger cars and light duty commercial vehicles.

## Features and benefits

- The advanced anticorrosion system provides excellent protection against crevice corrosion in aluminium and cavitation corrosion-erosion in cast iron, protecting the radiator components and ensuring longer life.
- The non-silicate formulation protects against the formation of gels and deposits, even in the presence of hard water, ensuring improved coolant stability and longer effective coolant life.
- Excellent heat transfer properties enable high-temperature engine parts (especially the aluminium heat-transfer surfaces found in some modern engines) to be effectively cooled and protected from damage.
- Can offer a single coolant/antifreeze for use in a wide range of vehicles, so ideal for mixed fleet use.
- Fully compatible with rubber tubing and sealing materials, and so prolongs the service life of water pump and seals.
- Good stability enables the product to be stored year round without problems.
- This environmentally friendly product contains no harmful, toxic or carcinogenic chemicals, and is not damaging to water or soil ecosystems.

# Product Data Sheet

## Typical data

<b>Sinopec Environmentally Friendly Engine Coolant YF-2A</b>	
Colour, visual	Blue
Specific gravity @ 20°C, kg/m <sup>3</sup> , ASTM D 1122	1080.0
Boiling point, °C, ASTM D 1120	112
Freezing point, °C, ASTM D 1177	-46.2
pH, ASTM D 1287	8.5
Foaming of engine coolants, ASTM D 1881	
volume, ml, max.	30
break time, sec, max.	1.8
Effect on automotive finish, ASTM D 1882	No effect
Corrosion test for engine coolants in glassware, weight loss, mg/specimen, ASTM D 1384	
copper	1.4
brass	1.0
steel	0.8
cast iron	1.6
solder	2.0
aluminium	1.6
Simulated service corrosion test of engine coolants, weight loss, mg/specimen, ASTM D 2570	
copper	2.2
brass	2.6
steel	1.2
cast iron	2.4
solder	3.2
aluminium	2.4
Corrosion of cast aluminium alloys in engine coolants at heat transfer surface, mg/cm <sup>2</sup> /week, ASTM D 4340	0.32
Cavitation corrosion and erosion-corrosion characteristics of aluminium pumps with engine coolants, rating for pitting, cavitation and erosion of the water pump, ASTM D 2809	9

These data are given as an indication of typical values and not as exact specifications.

# Product Data Sheet

## Industry and OEM specifications

<b>Sinopec Environmentally Friendly Engine Coolant YF-2A meets the performance requirements of the following industry specifications:</b>	
ASTM	D 3306, D 4985
BS	6580:2010
JIS	K 2234
SAE	J1034

<b>Sinopec Environmentally Friendly Engine Coolant YF-2A holds the following formal OEM approvals:</b>
Anshan Iron and Steel Mining Company
Shanghai Diesel Engine Co., Ltd
Xiamen Bus Company
Xiamen King Long United Automotive Industry Co., Ltd

## Accuracy of information

Data provided in this PDS is typical and subject to change as a result of continuing product research and development. The information given was correct at the time of printing. The typical values given are subject to variations in the testing procedures and the manufacturing process may also result in slight variations. Sinopec guarantees that its lubricants meet any industry and OEM specifications referred to on this data sheet.

Sinopec cannot be held responsible for any deterioration in the product due to incorrect storage or handling. Information on best practice is available from your local distributor.

## Product and environmental safety

This product should not cause any health problems when used in the applications suggested and when the guidance provided in the Material Safety Data Sheet (MSDS) is followed. Please consult the MSDS for more detailed advice on handling; MSDSs are available from your local distributor. Do not use the product in applications other than those suggested.

As with all products, please take care to avoid environmental contamination when disposing of this product. Used oil should be sent for reclamation/recycling or, if not possible, must be disposed of according to relevant government/authority regulations.

The SINOPEC trademark is registered and protected in Australia.

Issued: March 2012

© Sinopec 2012

1001\_Sinopec\_Environmentally\_Friendly\_Engine\_Coolant\_YF-2A