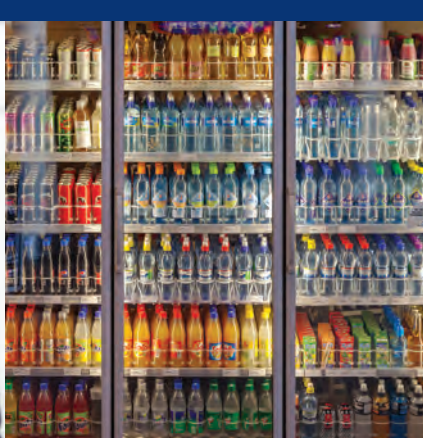
Industrial Coolants and Heat Transfer Fluids

JEFFCOOL® Product Line Overview

INDORAMA VENTURES

> Empowering potential.



JEFFCOOL® Product	Ethylene or Propylene Glycol Base	Nitrite (Gas Compression)	Freezing protection, °F Test Method: D-1177	Maximum bulk temperature, °F cast iron, steel, cooper, brass	Maximum bulk temperature, °F aluminum
E100	Ethylene	No	50 vol. % aqueous solution: -34˚F	300	190
P150	Propylene	No	50 vol. % aqueous solution: -30˚F	300	190
HD	Propylene	No	50 vol. % aqueous solution: -30˚F	325	190
E100N	Ethylene	Yes	50 vol. % aqueous solution: -34˚F	300	190
P150N	Propylene	Yes	50 vol. % aqueous solution: -30˚F	300	190
E300	Ethylene	No	50 vol. % aqueous solution: -34˚F	300	275
P200	Propylene	No	50 vol. % aqueous solution: -30˚F	300	190
SCA	Water-Based	No	30˚F (as-is, undiluted)		
SCA-N	Water-Based	Yes	30˚F (as-is, undiluted)		
AdPac-EP	Ethylene & Propylene	No	20˚F (as-is, undiluted)		
AdPac-N	Ethylene & Propylene	Yes	20˚F (as-is, undiluted)		

- Industrial Coolant and Heat Transfer Fluid
- Heavy Duty Stationary Engine Coolant
- Auto and Motorcycle Engine Coolant
- Food Equipment Heat Transfer Agent
- Supplement Coolant Additive
- Concentrated Inhibitor Package

Refer to brochure for freeze points of lower concentrations. Brochure contains freeze point curves for reference.
See Product Data Sheets/Tech Service Bulletin for individual product at each available concentration.
Product Data Sheets and Tech Service Bulletins available upon request.

Package type for all JEFFCOOL® products:
- Tank wagons
- 55 gallon poly drum
- 275 gallon tote

Industrial Coolant and Heat Transfer Fluid

JEFFCOOL® E100 Coolant EG

BENEFITS

Lowers maintenance costs and improves heat transfer.

APPLICATIONS

- Line Heaters: Circulates a heated fluid around pipe to raise the temperature of the pipe contents to control reactions or ease pumping operations.
- Snow-Melting and Refrigeration Systems: Snow-melting systems for loading ramps, walkways, highways and airfield runways. Also, as a coolant in ice rinks and air conditioning systems.
- Thermal Energy Storage, Heating and Cooling Systems: Used in combination heating and cooling systems for large buildings. The excellent corrosion protection prolongs the life of the piping, and is also an excellent heat transfer medium for solar energy collection systems.

JEFFCOOL® P150 Coolant PG

BENEFITS

Protects brass, copper, solder, steel, cast iron, aluminum and other metals commonly found in industrial cooling and heating systems. A foam inhibitor is included to minimize foaming tendencies.

APPLICATIONS

- Automotive and aircraft manufacturers
- Chemical manufacturers
- Dye and dye intermediate producers
- Electric power companies
- Ice skating rinks
- Paint, varnish and lacquer companies
- Paper and paper product companies
- Plastics and synthetic resin manufacturers
- Textile chemical manufacturers
- Fire sprinkler systems
- Data centers
- Propane vaporizers
- Geothermal systems

JEFFCOOL® HD Coolant PG

APPLICATIONS

Same applications as P150 + offers extra corrosion protection and longevity at elevated temperatures such as:

- Line Heaters
- HVAC systems and boilers

Heavy Duty Stationary Engine Coolant

JEFFCOOL® E100N Coolant EG N

BENEFITS

Protects brass, copper, solder, steel, cast iron, aluminum and other metals commonly found in industrial stationary engine systems.

APPLICATIONS

Uses in all heavy duty engines under many major brands.

JEFFCOOL® P150N Coolant PG N

BENEFITS

Protects brass, copper, solder, steel, cast iron, aluminum and other metals commonly found in industrial cooling and heating systems. A foam inhibitor is included to minimize foaming tendencies.

APPLICATIONS

Uses in all heavy duty engines under many major brands.

Indorama offers a dedicated team of professionals with the technical expertise to support. We provide a full service testing program for the JEFFCOOL® product line, and have developed a Sample Testing Kit Program to provide proper product integrity and maintenance. We provide free analysis on initial system charges to ensure product integrity and annual analysis at no charge.

Auto and Motorcycle Engine Coolant

JEFFCOOL® E300 Coolant (EG)

BENEFITS

A corrosion inhibitor package designed to provide corrosion protection of high temperature aluminum under heat transfer conditions.

APPLICATIONS

- Aluminum boilers, such as those used in high efficiency hydronic heating systems.
- Light duty and heavy duty engines with aluminum cylinder heads, including trucks, cars and motorcycles.
- JEFFCOOL® E300 product can be used in closed loop systems that are not in direct contact with potable water supplies.

Supplemental Coolant Additive

JEFFCOOL industrial coolants and heat transfer fluids

JEFFCOOL® SCA Coolant (WB)

BENEFITS

A concentrated inhibitor package specifically for the Indorama JEFFCOOL® E100 and P150 series of industrial coolants and heat transfer fluids. Can extend the useful life of heat transfer systems by replenishing critical inhibitors required to provide corrosion protection.

APPLICATIONS

- Supplemental coolant additive
- Corrosion inhibitor

Supplemental Coolant Additive

JEFFCOOL N-SERIES industrial coolants and heat transfer fluids

JEFFCOOL® SCA-N Coolant (WB) (N)

BENEFITS

A concentrated inhibitor package specifically for the Indorama JEFFCOOL® E100N and P150N series of industrial coolants and heat transfer fluids. Can extend the useful life of heat transfer systems by replenishing critical inhibitors required to provide corrosion protection.

APPLICATIONS

- Supplemental coolant additive
- Corrosion inhibitor

Food Equipment Heat Transfer Agent

JEFFCOOL® P200 Coolant (PG)

BENEFITS

Used where contact with food or potable water is possible and toxicological properties must be considered.

APPLICATIONS

Food grade

An inhibitor system is designed to protect most metals commonly found in industrial cooling and heating systems. A foam inhibitor is included to minimize foaming tendencies. Non-corrosive and low toxicity.

- Product Food Freezing: Spray and immersion freezing of packaged foods
- Defrosting Freezing Coils: A cold, aqueous solution of JEFFCOOL® P200 coolant is approved by the USDA for defrosting cooling coils where the exhaust air from the coils varies over a wide temperature range.
- Beer Cooling: One of our most successful applications used for beer cooling in breweries, utilized to cool fermentation tanks, yeast storage tanks and beer storage tanks.
- Can also be used for dairy products, wineries, meat packaging and more.

Concentrated Inhibitor Package

JEFFCOOL industrial coolants and heat transfer fluids

JEFFCOOL® AdPac-EP Coolant (EG) (PG)

APPLICATIONS

Corrosion inhibitor

JEFFCOOL® AdPac-EP product is used in the manufacturing of ethylene glycol-based and propylene glycol-based industrial coolants.

JEFFCOOL® E100 and P150 coolants are accepted for use in heat transfer applications, such as:

- Line Heaters
- Snow-melting and refrigeration systems
- Thermal energy storage, heating and cooling systems

Concentrated Inhibitor Package

JEFFCOOL N-SERIES industrial coolants and heat transfer fluids

JEFFCOOL® AdPac-N Coolant (EG) (PG) (N)

APPLICATIONS

JEFFCOOL® AdPac-N product is used in the manufacturing of JEFFCOOL® E100N and P150N heat transfer fluids and the prediluted versions. JEFFCOOL® E100N and P150N coolants are formulated to contain nitrite. These formulations can be used without a JEFFCOOL® SCA Pre-Charge in engines that require nitrite to prevent cylinder liner cavitation corrosion, as specified by the engine manufacturer.

Corrosion inhibitor

JEFFCOOL® AdPac-N is used in the manufacturing of ethylene glycol-based and propylene glycol-based coolants.

JEFFCOOL® E100N and P150N coolants are accepted for use in ALL heavy duty engines under many major brands.

(EG) Ethylene Glycol (PG) Propylene Glycol (WB) Water-Based (N) Nitrite

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About Indorama

Indorama Ventures is a world-class chemical company and a global integrated leader in PET and fibers serving major customers in diversified end-use markets. Following our core strategies, we develop innovative products for customer needs and to make great products for society. Headquartered in Bangkok, Thailand, Indorama Ventures has operating sites in 31 countries on five continents – in Africa, Americas, Asia, Europe & Eurasia.

Integrated Oxides & Derivatives

Indorama Ventures Integrated Oxides & Derivatives is a leading chemical intermediates and surfactants producer with a diverse range of products in growth markets such as home & personal care, agrochemicals, oilfield technologies, fuel & lube additives and more.

In January 2020, Indorama Ventures Public Company Limited completed its acquisition of Huntsman's world-class integrated oxides and derivative business, including:

- **Surfactants:** Integrated producer of a wide range of products for home and personal care, oilfield technologies, agriculture and process industries.
- **Ethylene & Derivatives:** Highly integrated manufacturer of ethylene, ethylene oxide, ethylene glycol, ethanolamines and other derivatives.
- **Propylene Oxide & Derivatives:** Highly competitive technology offerings in propylene glycol, methyl tertiary butyl ether (MTBE) and other derivatives.

Our operating sites include a large flagship site on the US Gulf Coast (USGC) at Port Neches, as well as Chocolate Bayou, Dayton and Clear Lake in Texas, Lake Charles, Louisiana, Ankleshwar, India and Botany, Australia.

> Contact us at iod.info@us.indorama.net or www.thirdcoastchemicals.com