JARYTHERM®

JARYTHERM® FOR PLASTICS AND POLYMERS

Arkema has a strong presence in the plastics and polymer industry, as supplier and manufacturer. Arkema offers an extensive product range for this industry: initiators (Luperox®), impact modifiers (Durastrength®, Clearstrength®), processing aids (Plastistrength®, Kynar®), as well as heat transfer fluids (Jarytherm®).

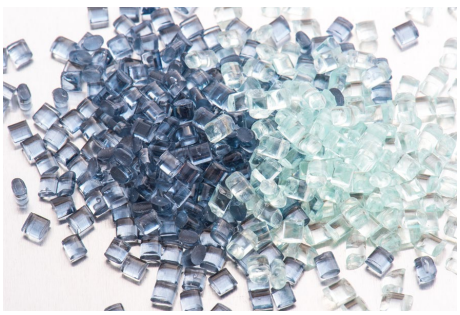
APPLICATIONS IN POLYMER MANUFACTURING

Several steps of polymer manufacturing operate at high temperature (200-300°C / 390-570°F) and thus require the use of a heat transfer fluid.
Jarytherm® fluids have been used for years in extruders for polymer manufacturing applications, such as polyolefins and polyamides, within Arkema group and at external customers.
The heat transfer fluid is circulating in a closed circuit and provided the minimum and maximum temperatures are within the acceptable limits, Jarytherm® fluids are perfectly suitable for use in extruders.

Polymer manufacturing
PMMA
Polyamides
Polyolefins
Styrenics
Polyesters and resins
Polyurethanes
Synthetic fibers

Polymerization process steps requiring the use of HTF

Raw material pre-heating → Polymerization → Recovery and Separation of monomers → Extrusion Moulding



JARYTHERM HEAT TRANSFER FLUIDS BY ARKEMA

WHAT IS JARYTHERM® USED FOR?

The primary purpose of using transfer fluids in a system is to transfer heat from your boiler to the equipment where a well-controlled and constant temperature is needed.
Arkema due to its history has a long experience with heat transfer fluids operating in the range of 200 to 350°C (400 to 575°F).

GOOD REASONS TO SELECT JARYTHERM®

Reduced CAPEX	Low pressure requirement: High fluid boiling point
	Standard material use: Non-corrosive toward carbon steel
Optimized OPEX	Efficient heat transfer: High calorific power
	Long fluid ageing life: High thermal stability
	Low maintenance: Limited fouling thanks to high heavies solubility
	Low energy consumption: Low fluid viscosity over temperature range
Process Safety	Non fire risks: High flash point
	Limited top up: Low formation of light impurities even at high process temperature

HOW TO MAINTAIN THE BEST QUALITY OF JARYTHERM® IN YOUR PROCESS?

All units using heat transfer fluids should operate using a proactive maintenance plan. Arkema is there to recommend solutions which encompass regular system analysis and fluid management (top-up, flash point control …).
Arkema also provides regular technical service to its customers. Arkema gives advice on the right fluid selection versus expected life time. Arkema has also developed partnerships with boiler manufacturers and EPC for the best assistance.

ARKEMA JARYTHERM® PRODUCT RANGE

Arkema has manufactured and commercialized Jarytherm® products for decades. They are synthetic aromatic based and made on purpose with a stable composition over years.

Characteristics	Jarytherm® BT06	Jarytherm® DBT
High boiling point/ ignition point	✓✓	✓✓✓
Low pour point and viscosity	✓✓✓	✓✓
Good thermal stability	✓✓✓	✓✓
Good heat transfer properties	✓✓✓	✓✓✓
Non-corrosive to materials	✓✓✓	✓✓✓
High flash point & auto-ignition temperature	✓✓	✓✓✓

JARYTHERM® PROGRAM

Arkema proposes different programs according to customer's requirements. We guarantee a long and cost effective heat transfer fluid use in your equipment. Our customer designed programs range from product supply to full fluid management.
For more details please contact us through our website (www.arkema.com).

JARYTHERM® ANALYTICAL SERVICE

Arkema provides analyses of the Jarytherm® fluid in-use.
This allows end-users to operate in safe conditions and maximize fluid lifetime.
The analyses give a clear view on the fluid ageing. Based on the results, the operating conditions and the history of the circuit, Arkema provides technical recommendations.

Characteristics	Standard method
Gas Chromatography	*Internal method*
Low boiling components %	
Jarytherm® fraction %	
High boiling components %	
Viscosity at 20°C (cSt)	ASTM D445
Flash point (open cup) °C	ASTM D92
Acidity (meq H^+ /100 g)	ASTM D664
Water content (ppm)	ASTM D6304
Insoluble materials (ppm)	-

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