



# JOTUN

## *Jotatemp*

650

Surface Tolerant Coating for  
Corrosion Protection at Extreme Temperatures



# Jotatemp 650



## IDEAL FOR NEWBUILDING AND MAINTENANCE

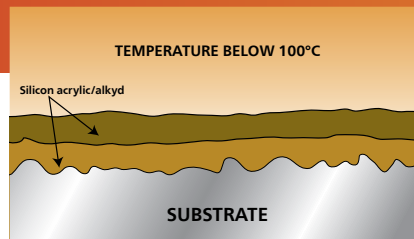
- Surface tolerant
- Application up to 400°C during operating
- No special equipment required
- No special preparation required
- No shut down required when painting

### No breakdown at extreme temperatures

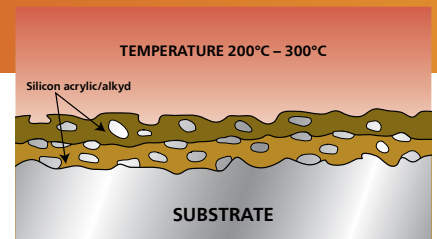
The organic elements in Jotatemp 650 do not breakdown at high heat as they do in silicon acrylics/alkyds where protection provided by the paint film is reduced – often referred to as the ‘Swiss cheese effect’.



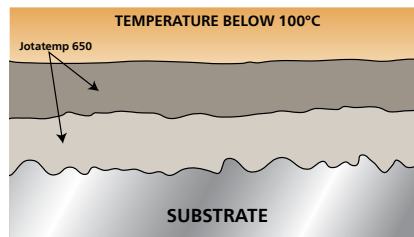
*Insulation removed from a pipe originally coated with a zinc containing coating. Zinc has worked but by sacrificing, thus limiting the lifetime of the protection.*



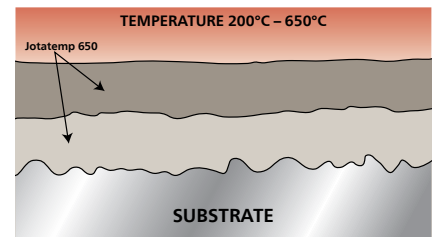
Typical silicon acrylic/alkyd coating using organic binders. Film thickness is low.



As temperature increases, the organic binders begin to breakdown. At between 200–300°C the silicon binder leaves vacuoles similar to a Swiss cheese.

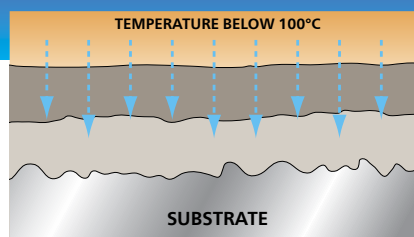


Jotatemp 650 is built of special inorganic binders that have organic modification thus providing excellent application and adhesion.

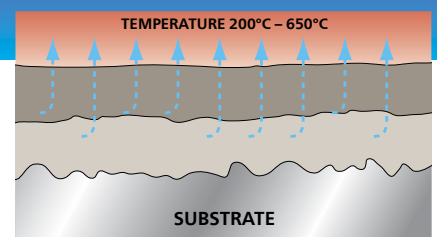


As temperature increases Jotatemp 650 provides a thick consistent barrier protecting the substrate over long periods.

### Barrier against corrosion



Jotatemp 650 provides a barrier to moisture during periods when temperatures are below 100°C.



As temperature increases the moisture is drawn out of the system.

Jotatemp 650 is a surface tolerant high build one component Inert Multipolymeric Matrix coating.

It is especially suited for preventing Corrosion Under Insulation during construction and shut down or low temperature periods. It provides corrosion protection of structures exposed to extreme high temperatures.

Being both surface tolerant and high build it can be used for high temperature application (hot substrates up to 400°C) meaning that maintenance can be carried out without needing to shut down the plant.

Jotatemp 650 provides corrosion protection of insulated and non-insulated carbon steel and stainless steel with dry operating surface temperatures.

Jotatemp 650 does not contain any zinc and therefore does not have a shortened life span caused by the sacrificial effect.

## Corrosion Under Insulation (CUI)

The main causes of CUI are:

- Moisture
- Chemical constituents in the moisture
- Chlorides in the insulating material
- Temperature gradient in the steel
- Cyclic temperature and condensation (precipitation) – also leading to salts accumulation
- Lifetime expectations / inspections
- Type of insulation
- Difficult inspection

## Project references

Project Name	Owner	EPC contractor	Destination	Yard	Year completed
Aramco Gas Abu Hadriya & Khursaniyah Fields – LNG Plant	ARAMCO	Bectel-Technip	Saudi Arabia	Saudi Arabia	2007
Aramco NGL – NGL Recovery Expansion	ARAMCO	JGC Corporation	Saudi Arabia	Saudi Arabia	2007
Shell Maintenance Program – Corio Refinery	Shell Company of Australia – Corio	McElligotts	Australia	Australia	2010
Shell Refinery Refurbishment Project – Geelong	Shell Company of Australia – Corio	McElligotts	Australia	Australia	2010
Total Petrochemical Port Arthur Refinery	Total Petrochemicals USA, Inc.	Brock, A&L Industrial (Services and Shaw)	United States	United States	2010
Petrobras Pasadena Refinery Plant	Petrobras	Brand Energy	United States	United States	2011
Chevron Phillips Cedar Bayou Plant Services Inc.	Chevron Corporation	Mobley Industrial	United States	United States	2011
Shell Bonga – FPSO	Shell Bonga		Nigeria	Nigeria	2011
Shell Oil – NORCO Refinery	Shell		United States	United States	2011
Ruwais Refinery Expansion Project	Abu Dhabi Oil Refining Company (TAKREER)	SK Engineering & Construction	United Arab Emirates	Korea	2011
Jubail Export Refinery Project	ARAMCO	Samsung Engineering	Saudi Arabia	Korea	2011
Shell Bukom	Shell Eastern Petroleum Pte Ltd		Singapore	Singapore	2011
Ethylene Glycols Singapore	Ethylene Glycols (S) Pte Ltd	Hai Leck Holdings Ltd	Singapore	Singapore	2011
Shell Seraya	Shell Chemicals Seraya Pte Ltd	Hai Leck Holdings Ltd	Singapore	Singapore	2011
CUI Piping	Noble Mill Co., Ltd.	Noble Mill Co., Ltd.	Thailand	Thailand	2011
Caltex Refinery Lytton	Caltex Australia		Australia	Australia	2012
Indian Oil – Paradeep Refinery	Indian Oil Corporation Ltd	L&T Power	India	India	2012
Yanbu Export Refinery Project	ARAMCO	Daelim Industrial Company Ltd.	Saudi Arabia	Korea	2012
St. Fergus Hot Oil Project	Total E&P	RBG Ltd.	United Kingdom	United Kingdom	2012

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