



# GENERATION FOUR ENGITECH LTD.



## HITECH THERM FOOD 57

INTERNATIONALLY CERTIFIED & ACCEPTED PREMIUM FOOD GRADE  
THERMIC FLUID



**HITECH SOLUTION**  
SPEED INNOVATION EXCELLENCE

[www.hitechsolution.co.in](http://www.hitechsolution.co.in)



## Our Achievements



**BUSINESS  
GAURAV**  
SME AWARDS 2012

**Under Sector  
"Chemical and Petrochemicals"  
as Best  
Micro Enterprise in India**



"Award presented by : Mrs. Shikha Sharma – MD and CEO, Axis Bank"

"Award accepted by: Mr. Dhansukh Chopra (Director)  
and Mr. R. P. Vyas (Director) GFEL"

## "Manufacturing Business of the Year 2011 (M)"



Organised by

**Franchise India**



**Award Honoured to Mr. Dhansukh Chopra at Mumbai  
Director - Generation Four Engitech Ltd.**



**Ministry of Micro, Small and Medium Enterprises  
(Government of India)**

**सूक्ष्म, लघु और मध्यम उद्यम मंत्रालय**

## Our Collaboration

**SOURCE EXPLORER Ltd.**

St Box No : 91642, Nathan Road.

TSIM SHATSUI, Hongkong.





**NSF International / Nonfood Compounds Registration Program**

Nonfood Compounds  
Program Listed

July 16, 2015

RE: Hitech Therm Food 57  
Category Code: HT1  
NSF Registration No. 151652

Dear Mr. Dhansukh Chopra:

NSF has processed the application for Registration of **Hitech Therm Food 57** to the NSF International Registration Guidelines for Proprietary Substances and Nonfood Compounds (2013), which are available upon request by contacting [NonFood@nsf.org](mailto:NonFood@nsf.org). The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements including FDA 21 CFR for appropriate use, ingredient and labeling review.

**This product is acceptable for use as a heat transfer fluid where there is possibility of incidental food contact (HT1). The amount used should be the minimum required to accomplish the desired technical effect.**

NSF Registration of this product is current when the NSF Registration Number, Category Code, and Registration Mark appear on the NSF-approved product label, and the Registered product name is included in the current NSF White Book Listing of Nonfood Compounds at the NSF website ([www.nsfwhitebook.org](http://www.nsfwhitebook.org)).

NSF Listing of all Registered Nonfood compounds by NSF International is not an endorsement of those compounds, or of any performance or efficacy claims made by the manufacturer.

Registration status may be verified at any time via the NSF website, at [www.nsfwhitebook.org](http://www.nsfwhitebook.org). Changes in formulation or label, without the prior written consent of NSF, will void Registration, and will supersede the on-line listing. Please contact your NSF Project Manager or [nonfood@nsf.org](mailto:nonfood@nsf.org) if you have any questions or concerns pertaining to this letter.

Sincerely,



Carolyn Gilliland  
NSF Nonfood Compounds Registration Program

Company No: C0250534

***Hitech Therm Food 57 meets FDA specification defined in 21CFR 172878, requirements of United States Pharmacopia (USP), National Formulary (NF) and is registered with the NSF-USA (HT-1)***

***Pioneer Petrochem & Technology is Sister Concern of  
Generation Four Engitech Ltd.***

## About Company

We are a leading organization in the field of Thermic fluid and Heat Transfer system expertise for the last seven years. During this span more than 3000 customers have patronized our Silicon Green 100% Synthetic Thermic Fluid in India and Abroad.

Now our R & D wing has developed and established Hitech Therm Food 57 which is specially formulated for the industries whose end products are orally consumed like Edible oil, Salt, Solvent, Extraction Plants, Dairy Product, Namkeen, Sweets, Dehydration, Dal Mills, Seed Dryers, Food Processing, Bakery Products, Pharma, Spices, Herbs, Restaurants, Distillery and many more.

Our product Hitech Therm Food 57 has been listed in White Book of NSF, USA as a Food Grade Thermic Fluid, (HT 1) which could be safely used by industry like that of yours in Thermopack Boilers for efficient transfer of Heat (HT1 Category). You are well aware that white Book listing is done only after thorough investigation by NSF, USA.

We maintain strict quality control while manufacturing our synthetic as well as food grade Thermic Fluids for that we have been awarded by Zee Business & Axis bank. We are also glad to mention that most of the Brand leaders in India have been using our Thermic Fluid, utilizing our unique cleaning services and expert advices on day to day problems of Heat Transfer System.

Hitech Therm Food 57 is designed with Cutting edge Technology with blocked carbon molecular chains which makes it more stable and superior than any other Food Grade brand available in India.



HT T60

HT F 57

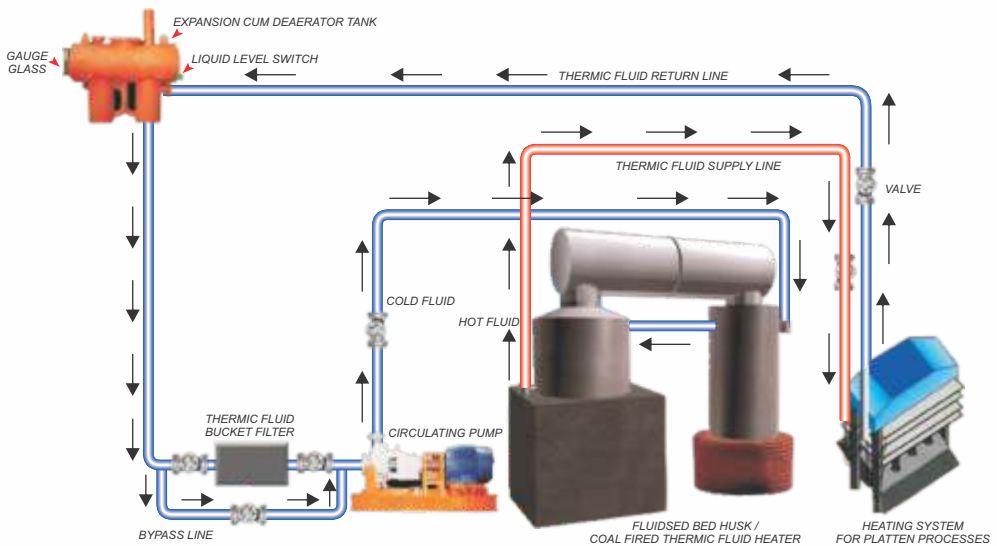
CLEAN 205

CLEAN 206

CLEAN 308

***Are you a food or food contact product manufacturer***

**Wait a sec!!!!  
use only Food Grade  
Thermic Fluid**



## ***Searching For Efficient Food Grade Thermic Fluid?***

Which can provide :

- International acceptance & certification
- High performance
- Competitive price
- Safe to device & clean to environment

**Then..... go for Hitech Therm Food 57**

## The G4's DNA ?

"Speed"



"Innovation"

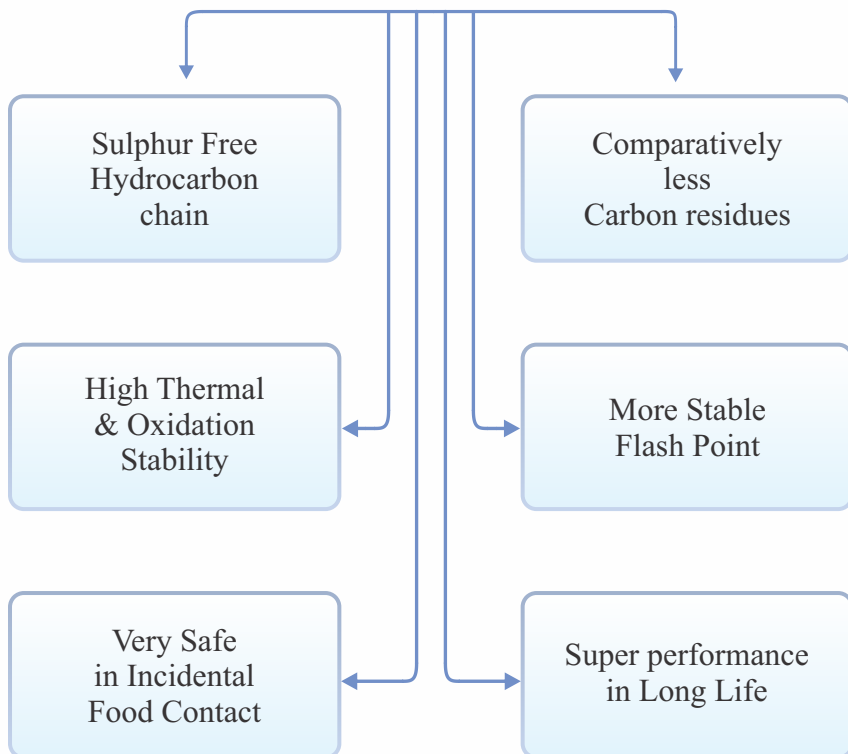


"Excellence"



## Main Features

### *Hitech Therm Food 57* *High Performance Food Certified Thermic Fluid*

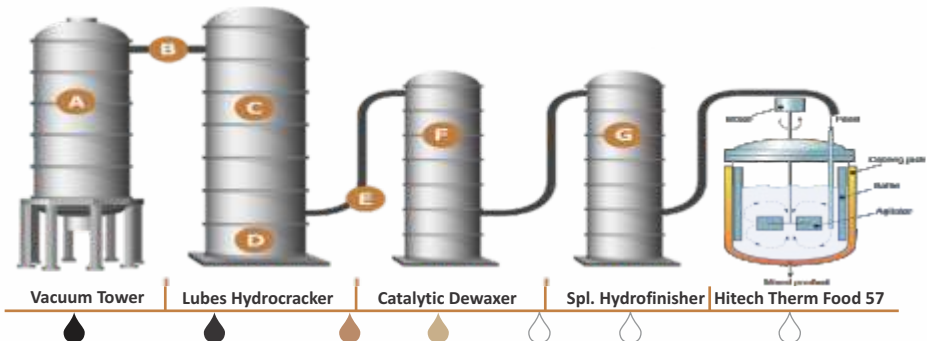
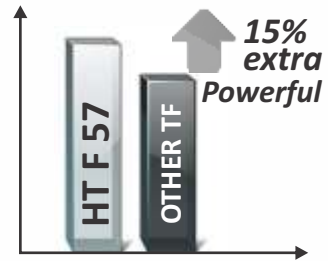


## Why to use Hitech Therm Food 57?

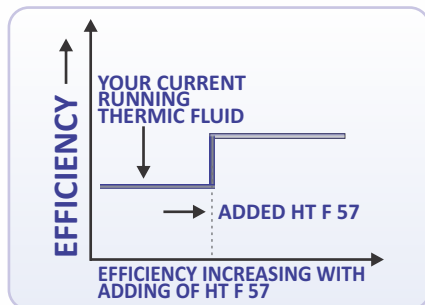
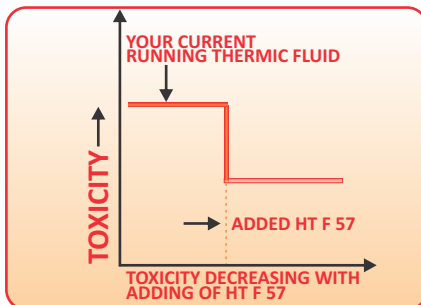
Hitech Therm Food 57 is manufactured out of world standard ingredient, the base oil itself having the power 15% more in oxidation & thermal stability than other branded similar products.

Thermic Fluid is not a lubricant it is a speciality product which have the major working of heat conductivity and heat traferability. It is our core subject, we can understand users and manufacture the best thermic fluid.

The product is extra processed for more stable molecular chain and made free from sulphur and aromatic chain for food safe & long life of thermic fluid.



If you have established a new thermopack system or existing using other market product like Hytherm 500, Hytherm 600, Servotherm, Shell Thermia, Therminol 55. You gain advantage by adding Hitech Therm Food 57 for improvement in your thermic fluid performance & decreasing the toxicity of the current running thermic fluid.





## Physical Properties

### Kinematic Viscosity @ 40°C



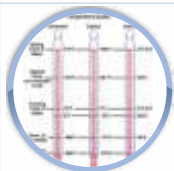
(ASTM D445)  
27cSt

### Flash point



(ASTM D-92)  
220°C  
428°F

### Max. Bulk Temperature



320°C  
608°F

### Pour Point



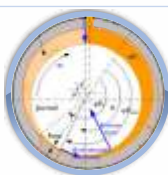
(ASTM D97)  
-15°C  
5°F

### Boiling point@1013 mbar



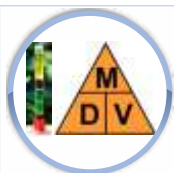
(ASTM D1160)  
355°C  
671°F

### Max. Film Temperature



345°C  
653°F

### Density @ 25°C



(ISO 12185)  
0.85

### Auto Ignition Point



(ASTM E659)  
380°C  
716°F

### Appearance



Colorless  
Transparent  
99.9% clear

### Food Grade



Reg. No. 151652  
(HT1)  
Incidental Food Contact



## Definitions



**Viscosity :** Viscosity of a fluid is a measure of its resistance to gradual deformation by shear stress. For liquids it corresponds to the informal concept of “thickness”.



**Flash Point :** Flash Point is the lowest temperature at which a liquid form an ignitable mixture in air near the surface of liquid.



**Maximum Bulk Temperature :** The maximum Bulk temperature of a heat transfer fluid is highest average temperature and will usually take place at the exit of the fluid heater. Thermal degradation of the heat transfer fluid will be very high above this temperature.



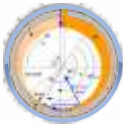
**Pour Point :** The pour point of a liquid is a temperature at which it becomes semi solid and loses its flow characteristics.



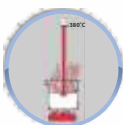
**Boiling Point :** The boiling point of a liquid is the temperature at which the vapor pressure of the liquid equals temperature surrounding the liquid and liquid changes into vapor.



**Density :** Density is the ration between mass and volume or mass per unit volume.



**Maximum Film Temperature :** The temperature of a fluid inside a convection boundary layer.



**Auto Ignition Point :** Auto ignition point is the lowest temperature at which, liquid will spontaneously ignite in a normal atmosphere without an external source of ignition, such as a flame or spark.



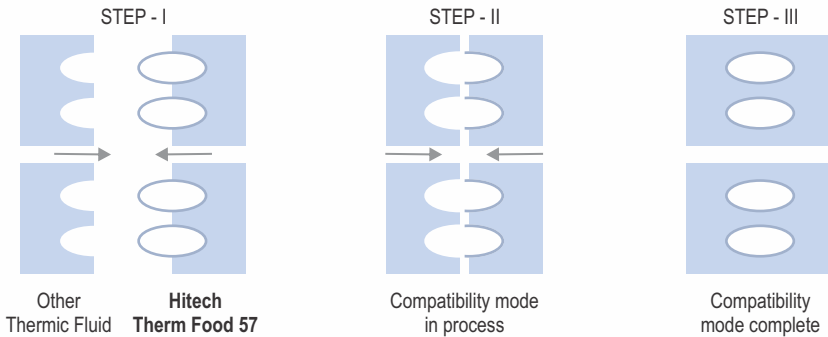
**Food Grade :** Food grading involves the inspection, assessment and shorting of various food contact product regarding quality, freshness and legal confirmative.

### ***Tabulation of Properties of Hitech Therm Food 57 with respect to Temperature***

Temperature °C	Specific Heat kj/kg°K	Liquid Density g/ml	Liquid Viscosity cSt	Temperature °F	Vapour Pressure mm-Hg
-10	1.7531	.858	374	14	0.00
0	1.7972	.854	225	32	0.00
10	1.8211	.850	110	50	0.00
20	1.8574	.856	68	68	0.00
30	1.9162	.842	43	86	0.00
40	1.9413	.839	27	104	0.00
50	1.9981	.834	17	122	0.00
60	2.0314	.830	12	140	0.00
70	2.0738	.826	8.12	158	0.00
80	2.1151	.821	6.14	176	0.00
90	2.1538	.817	4.61	194	0.06
100	2.2016	.813	3.23	212	0.12
110	2.2476	.808	2.78	230	0.21
120	2.2791	.805	2.21	248	0.32
130	2.3152	.801	2.00	266	0.37
140	2.3614	.798	1.78	284	0.59
150	2.4011	.794	1.61	302	0.70
160	2.4472	.790	1.54	320	1.19
170	2.4913	.786	1.46	338	1.79
180	2.5410	.782	1.31	356	2.81
190	2.5938	.778	1.23	374	4.19
200	2.6121	.774	1.16	392	6.31
210	2.6572	.770	1.07	410	9.14
220	2.7010	.766	.99	428	13.54
230	2.7331	.762	.91	446	19.00
240	2.7822	.758	.81	464	26.18
250	2.8241	.754	.75	482	35.12
260	2.8412	.751	.68	500	49.38
270	2.8772	.747	.61	518	66.70
280	2.9911	.743	.58	536	90.14
290	3.0262	.740	.52	554	120.82
300	3.0514	.737	.49	572	150.46
310	3.0881	.733	.45	590	278.13
320	3.1201	.729	.44	608	345.02

Figures mentioned above are as per laboratory observation of a particular batch (Test No. KPA4325 23-07-15). These are for reference only and may vary from batch to batch, hence do not attract any techno-legal reference whatsoever.

## Compatibility Process With Other Thermic Fluids



We can add Hitech Therm Food 57 to our existing running thermic fluid. It is compatible with Hitech Therm-60, Hytherm 500-600, Shell Thermia, Servotherm, Therminol-55 and by adding Hitech Therm Food 57 we can reduce the toxicity of existing thermic fluid.

## Reduce the toxicity of existing Thermic Fluid

It is a fact that by adding a non toxic product in a toxic product we can reduce the toxicity of the current toxic product and adding Hitech Therm Food 57 will not only reduce the toxicity of your current running thermic fluid it will also increase the overall performance and life of your thermic fluid.



We are fully integrated in production of Hitech Therm Food 57. Controlling quality at every step of the manufacturing process. Purity is preserved by dedicated pipes and tank. Careful labeling procedures, stringent handling and shipping of the product to guarantee quality.

## THERMIC FLUID SYSTEM CLEANING CHEMICAL

### Cleaning of Thermic Fluid System



### Cleaning Results



#### When To Clean The System

1. If your oil has carbon content more than 2%.
2. If your radiators are not giving proper heat due to deposition.
3. If your system is 10-15 years old.
4. If there is heavy carbon formation due to accident in the system.
5. If your running fluid has crossed the standard physical parameters.



#### Understanding The Varnish

The nature of varnish is sticky, therefore the contaminants gets stuck in varnish deposits. Our cleaning formula dissolves the varnish in water & bring these stuck particles into circulation, which gets stuck in varnish over years. These contaminated particles once in circulation can be taken out through the drains.



## Testing Thermic Fluid

### India's Only Specialised Thermic Fluid Testing Lab Facility

*(Its true - Any lab can test your thermic fluid but you will get benefit only if test's are correctly conducted)*

#### Kinematic Viscosity



@40°C

It is very Important test to check your fluids proper flow rate. i.e. how fast is heat transfer.

#### Flash point



ASTM D-92

It reflects your fire risk, due to Thermic Fluid which is important for safety.

#### Carbon Residue



Result are in %

Increase in carbon will increase your fuel cost and decrease your machine performance. It is an economical test.

#### Suspended Particle & Contamination



We check your Thermic Fluid for suspended particles and contamination, whether parameter exceeds.

*Above tests are essential ones and should be conducted every 4 months. We also undertake other tests relating to thermic fluids.*

*For details contact :*

**Shri Dhansukh Jain - 092140 48652**

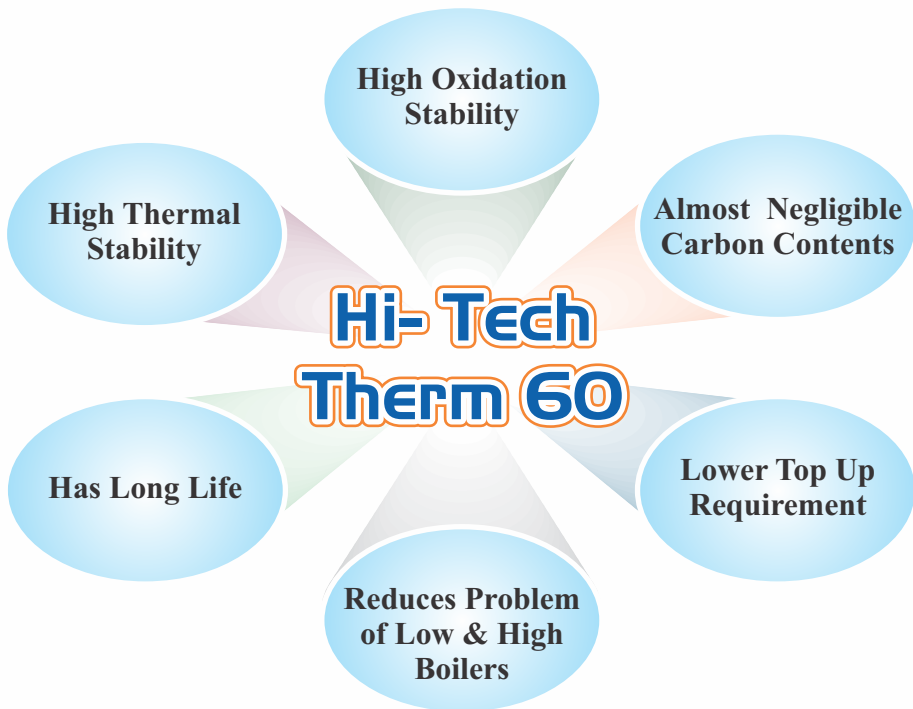
email : [en@hitechsolution.co.in](mailto:en@hitechsolution.co.in)

**Get recommendation from expert regarding the existing condition of oil and action to be taken in future for better performance**

## GUIDE LINE

1. Send your Sample in clean, Contamination & moisture free bottle.
2. Send at least 750 ml to 1000ml of thermic fluid
3. It is better to draw sample through needle valve' while pump is running.
4. Throw 200 ml of oil and then collect the oil for sample testing.
5. For proper recommendation fill all columns in testing form.
6. Send Sample to --  
**Generation Four Engitech Ltd.**  
**Hitech Solution**  
**Mandeep Tower, Residency Road, Opp. Sankalp Restaurant, Jodhpur (Raj)**  
**Tel. : 0291-5107038**  
**Mobile : 092140 48652**
7. Guideline for Sending sample by courier.
  - A. Send Sample in Chemical Sample Bottle Available in Indian Market.
  - B. Ensure that bottle/can is leakproof.
  - C. Fill the bottle 100% with no air.
  - D. Pack the sample in Square box with paper & plastics surrounding.
  - E. If your Packing is Poor, Courier will not accept the sample.
  - F. Write Proper Address in Details with Phone Numbers.

## Silicon Green 100% Synthetic Thermic Fluid



Why to use

### Hi-Tech Therm 60

as new fill or Top-up in your thermic fluid heater.

1. Less tendency to increase viscosity
2. Very low carbon residue
3. Carbon protection technology.

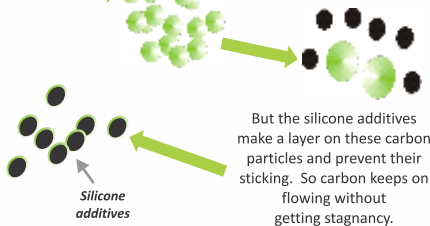


### Working of Special Additive

SILICONE GREEN  
SYNTHETIC THERMIC  
FLUID

#### Hitech Therm 60

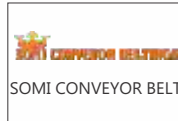
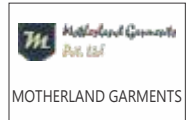
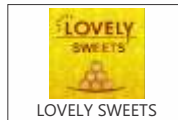
When heated after a certain period of time : carbon particles are formed



**Mix with your existing Thermic Fluid and get benefit**



## Our Golden Clients





**Actual Photographs of Generation Four Engitech Ltd. Manufacturing Plant**



## ***Technical Support (Multi Tiered Technical Support)***

Our technical support services are divided into III tier in order to better serve our customer base.

### **TIER - I**

1. This is initial support level responsible for basic customer issues.
2. It starts with determining the customer's issue by analyzing the sample.
3. Once identification of the underlying problem is done " The specialist begins sorting through the possible solutions available



### **TIER II**

1. More in depth technical support level
2. Administrative level support.
3. Include onsite inspection of system design & networking.
4. Compatibility related issues in case of Top-ups on other fluids

### **TIER III**

1. Highest level of support.
2. Back end support for handling the most difficult or advanced problem.

## ***Technical Service***

Experienced technical service specialist can answer your questions regarding heat transfer fluid selection, system start-ups, system design, and operational issues.

call us on: 9214048652

or contact : [en@hitechsolution.co.in](mailto:en@hitechsolution.co.in)





[www.hitechsolution.co.in](http://www.hitechsolution.co.in)

## Contact Details :

■ [en@hitechsolution.co.in](mailto:en@hitechsolution.co.in) ■ [cc@hitechsolution.co.in](mailto:cc@hitechsolution.co.in) ■ [or@hitechsolution.co.in](mailto:or@hitechsolution.co.in)

Regd. Office :

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Tel. : 0291-2772655 Fax : 0291-5109091 Mobile : 0 92140 48652

Mfg. Plant :

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Roorkee, Uttarakhand. Mobile : 09760366343

Admn. Office :

**Hitech Solution**

Mumbai Bazar, 387-Last Bus Stop, Park Side, Vikhroli (W) Mumbai -79

Collaboration with :

**SOURCE EXPLORER Ltd.**

St Box No : 91642, Nathan Road. TSIM SHATSUI, Hongkong.

Local Representative :



Disclaimer:

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