

LEADING THE WORLD TO A GREENER TOMORROW



INTRODUCTION

As we look at the growth over the years since our inception in 2010, we are extremely proud of what Trinity Star team has achieved, and even more excited about our outlook for an equally promising future. We have successfully transitioned from a local Dubai start-up to become a respected firm, garnering business from across the UAE and Middle East, while earning our clients' trust along the way.

It is satisfying to know that we are able to help our clients contribute to the sustainable and eco-friendly future and enable them to connect and operate their business more efficiently and economically. Customer satisfaction is the hallmark by which we measure our performance, and we hold ourselves, as do our clients, to the highest standards of quality.

In this continually evolving marketplace, our clients are more informed than ever about their solutions provider options. Even so, they continue to select TST as their partner of choice because of our experience, commitment to quality and community, and integrity.

When conveying TST successes, we always return back to three guiding principles-each of which has helped define who we are today



COMPANY PROFILE

Based in Dubai, Trinity Star (TST) was founded in the year 2010, and incorporated in February 2011 with the vision of developing a greener and more sustainable environment for its clients and for the future generations to come. Dedicated to the cause of integrating advanced technology in the fields of energy, water, and waste; TST brings out products that define benchmarks.

VISION

Our main priority is to dynamically contribute to a sustainable, ecologically safe, and protected environment by providing eco-energy solutions. To TST, this means meeting the needs of society as a whole, whilst respecting and being concerned about the ability of the future generations to live in a better, safer and eco-friendly environment. The flexibility of our organization permits this change to be realized with ease and comfort, whereby providing a peoplefriendly atmosphere with enormous potential for meaning

FUTURE SUSTAINABILITY OUR MISSION

Our mission is to conserve the unnecessarily wasted energy and provide our clients with safer, more reliable, more efficient, and environmentally friendly energy saving solutions and products thereby maximize savings on energy bills as well as being mindful of the needs of future generations.



PRODUCT REVIEW

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PRODUCT REVIEW



MAXR100[™]- Product Review Doc Ref No.001/17

MaxR100[™] is an intermetallic compound technology that, when introduced into the refrigerant oil of a system, forms a permanent bond to metal surfaces. This action removes oil fouling, changes the thermal nature of the metal and lowers the boiling point of the refrigerant gas, resulting in a more efficient operating system with substantial savings in energy costs.

MaxR100[™] is Unique

MaxR100[™] forms a protective molecular layer that will NOT change mechanical tolerances. MaxR100[™] contains no elements of the Halogen group, particularly Chlorine, Fluorine, nor Sulphur or Phosphorous. MaxR100[™] does NOT contain PTFE (Teflon[®]) or any other particulate. MaxR100[™] will NOT contaminate waste oil.



MAXR100[™] Benefits:

- Restores like-new performance
- Reduces energy consumption 10%+
- Reduces humidity up to 50%
- Softens and conditions seals
- Quieter running equipment
- Reduced compressor run time
- Extends lubricant life
- Extends equipment life
- Less downtime & maintenance costs
- Outstanding anti-friction protection
- Reduces oxidation
- Protects mechanical parts
- Results in quieter running equipment Rapidly improves operating conditions

MaxR100[™] Application

- a) MaxR100[™] is added to the system in the same way that the refrigerant is applied. For units up to 10 tons, add 1 fl/oz of MaxR100[™] per ton in sealed compressors.
- b) Units over 10 tons, remove 10% of the compressor oil and replace with MaxR100[™].
- c) It typically takes an HVAC technician about 15 minutes to install MaxR100[™]. Although results are felt and heard almost immediately, allow 2 weeks for the product to produce its full benefits. MaxR100[™] is a one-time application.



TYPES OF MAXR100 & SUITABILITY FOR VARIOUS REFRIGERANTS

Doc Ref: 002/2017

Sr.No	Refrigerant Type	Lubricant	MaxR100™ Type
1	R-12	MO or AB	MaxR100™ MO
2	134a	POE	MaxR100™ POE
3	MP39 (R-401A)	MO or AB	MaxR100™ MO
4	409A (R-409A)	MO or AB	MaxR100™ MO
5	R-500	MO or AB	MaxR100™ MO
6	MP66 (R-401B)	MO or AB	MaxR100™ MO
7	R-13	MO or AB	MaxR100™ MO
8	R-503	MO or AB	MaxR100™ MO
9	R-23	POE	MaxR100™ POE
10	95 (R-508B)	POE	MaxR100™ POE
11	R-502	MO or AB	MaxR100™ MOE
12	HP62 (R-404A)	POE	MaxR100™ POE
13	507 (R-507)	POE	MaxR100™ POE
14	HP80 (R-402A)	AB	MaxR100™ MO
15	408A (R-408A)	AB	MaxR100™ MO
16	HP81 (R-402B)	MO or AB	MaxR100™ MO
17	R-22	MO or AB	MaxR100™ MO
18	407C (R-407C)	POE	MaxR100™ POE
19	410A (R-410A)	POE	MaxR100™ POE
20	134a Automotive	PAG	MaxR100™ MO

MO	:	Mineral	Oil

POE : Polyester

AB : Alkybenezene

PAG : Polyalkylene Glycol



TECHNICAL DOCUMENT



MaxR100[™] Technical Document Frequently Asked Questions Doc. Ref No.003/2017 – 3 Pages

The following FAQ's answers commonly asked questions concerning MaxR100 refrigeration oil supplement, along with other related issues.

DOES MAXR100 VOID MANUFACTURERS WARRANTIES?

No. Almost all manufacturer warranties are good for one year. But on top of that, a manufacturer has set limits and specifications that the recommended oil needs to meet. MaxR100 not only meets but exceeds these specifications as shown on our "Spec Sheet".

WHAT ABOUT ACID FORMATION?

Typically acids form when moisture is introduced into the HVAC system. The air that we breathe has enough moisture to create acids if it is introduced. One benefit to MaxR100 is our anti-oxidants, which lab testing has shown that we provide 3 times the oxidation and corrosion protection that untreated oil provides. This has also been seen from spectro-analysis reports in the field.

WHAT ABOUT FILTER CHANGES?

Unlike an automobile, the oil inside a hermetically sealed system will remain in useable condition until contaminants are introduced. These contaminants may be in the form of metal shavings due to direct metal to metal contact or by the introduction of outside foreign materials, such as moisture. In hermetically sealed systems rarely if ever do we come across filters that need to be changed. But on lower temp systems, systems that have had compressor burn outs or semi-hermetic, the chances increase that outside contaminants have been introduced. In these cases we recommend that the filters be monitored for one week, daily after installation. In the long run, it's easier to change a filter than to change out an entire compressor.

IS MAXR100 COMPATIBLE WITH ALL REFRIGERATION OILS?

MAXR100 is compatible and will readily mix with standard refrigeration oils because both MAXR100 and standard refrigeration oils are napthenic based. MAXR100 is compatible and will mix readily with some synthetic oils. Contact your MAXR100 representative to determine the compatibility of any synthetic oil applications you may have.

DOES MAXR100 AFFECT ELECTRIC MOTORS?

Motors in hermetically sealed units will enjoy similar benefits that compressors receive. 70% of all hermetically sealed motor failures are caused by bearing failures. Although it may appear on the surface that the motor failure is electrical in nature, in most cases it is a bearing failure that causes a motor stator misalignment which, in turn, causes motor winding damage. Since motor bearings receive the same protection as compressor bearings, motor life is extended when MAXR100 is used.

DOES MAXR100 IMPROVE MECHANICAL SEAL LIFE?

Yes. Semi-hermetic units require mechanical shaft seals to retain the valuable refrigerant charge, and to keep out air and moisture. Mechanical seals utilize two ultra-precision machined and polished surfaces to generate a zero leakage shaft seal. The mechanical seal is, by far, the most precisely manufactured and most delicate component in the compressor. The seal's highly polished surfaces



can easily be damaged by dry starts, corrosion, or rough bearings. Since these problems are avoided or at least minimized in units treated with MAXR100, the mechanical seal life is improved.

WILL THE ADDITIVES SETTLE OUT?

No. MAXR100 Refrigeration Oil Supplement contains NO solids. The additives cannot settle out, or be filtered out. They are actually chemically bonded to the napthenic oil base molecules.

WHAT ELASTOMERS CAN BE CONDITIONED?

The following elastomers can benefit from the conditioning: Neoprene Nylon[®] 66 Mylar Viton[®] Polypropylene Buna [®]Viton is a registered trademark of DuPont Dow Elastomers

WHAT ARE MAXR100'S LIMITATIONS?

Consistent, long-term, cost effective benefits associated with MAXR100 treatments are possible when the operation and maintenance of the refrigeration or air conditioning systems follow established industry practices. Systems that are operated and maintained properly will receive the greatest benefit.

The water content of refrigeration oil is an important variable (with or without MAXR100) in refrigeration systems because water can hydrolyze with refrigerant and form strong corrosive acids. If the water content of refrigeration oil is greater than 200 ppm there are serious system problems (an internal water leak, for example) that MAXR100 cannot fix. It is the industry standard to operate with no more than 120 ppm water in the oil.

Systems that operate with more than 120 ppm water should not be treated with MAXR100 because the additives will not perform as well, nor last as long under these conditions. Properly operating refrigeration and air conditioning systems treated with MAXR100 will receive the greatest benefit and the highest return on investment.

An oil analysis should be performed prior to treatment to insure that water concentrations are acceptable and that maximum benefits can be obtained.

WILL THE PROTECTIVE FILM AFFECT BEARING TOLERANCES?

No. The contact activated barrier that bonds to all metal surfaces is extremely thin. The thickness of this film cannot be measured by the tools available to a machinist. The presence of this film will not affect bearing tolerances of their alignment.

HOW SHOULD MAXR100 BE STORED AND SHELF LIFE?

MaxR100 should be stored in a cool dry place. The shelf life of MaxR100 is indefinite as long as the foil seal has not been broken and has been stored properly. If the foil seal has been broken, we recommend purging the container with Dry Nitrogen before storage and before the next use. If the MaxR100's normal color has darkened (low temp blend dark brown and in mineral and POE blends dark golden brown), it is a sign of oxidation and should not be used in any HVAC equipment.

WHAT TEMPERATURE RANGES CAN MAXR100 BE USED?

This product can be used where temperatures are as low as -65F, or as high as 400



IS MAXR100 COMPATIBLE WITH ALL REFRIGERANTS?

MAXR100 is readily miscible in the following refrigerants;

		0	FCs				
Color	Gas type	Chemical Name	Container sizes	Application	Oil type	Color	Gas ty
	11	Tricholorofluoromethane	100lb 200lb	Centrifugals	Mineral Alkylbenzene		
(white)	12	Dichlorodifluoromethane	12oz 30lb 50lb 145lb	Med & Hi temp Refrig. & Auto	Mineral Alkylbenzene		22
	13	Chlorotrifluoromethane	9lb 23lb 80lb	Ultra low temp refrigeration	Mineral Alkylbenzene	4	123
	113	Thrichlorotrifluoroethane	100lb 200lb	Comm. Indust A.C.	Mineral Alkylbenzene		401A (M
	114	Dichlorotetrafluoroethane	150lb	Ind. Process Centrifugals	Mineral Alkylbenzene		401B(M
IE1	500	12/152a blend	30lb 125lb	Comm. A.C.	Mineral Alkylbenzene		402A(HI
	502	22/115 blend	30lb 50lb 125lb	Med & low Temp Ref	Mineral Alkylbenzene		440 A /FT
	503	13/23 blend	8lb 20lb 80lb	Ultra low temp refrig.	Mineral Alkylbenzene		410A/F

ncrus					
Color	Gas type	Chemical Name	Container sizes	Application	Oil type
	22	Chlorodifluoromethane	30lb- singles 30lb- pallets 50lb,125lb	A.C. & Low &Med temp Ref.	Mineral Alkylbenzene Polyol Ester
	123	Dichlorotrifluoroethane	100 lb, 200lb	Low Pressure Centrifugals	Mineral Alkylbenzene
	401A (MP39)	22/124/152a blend	30lb, 125lb	Med Temp refrigeration	Alkylbenzene Polyol Ester
	401B(MP66)	22/124/152a blend	30lb, 125lb	Low Temp refrigeration	Alkylbenzene Polyol Ester
	402A(HP80)	22/125/290 blend	27lb,	Low & Med	Alkylbenzene
			110lb	Temp refrigeration	Polyol Ester
	416A/FR-12	134a/124/600blend	9.6oz 25lb 125lb	Mobile, A.C. & Med. Temp. Ref & Chillers	Mineral Alkylbenzene Polyol Ester

HFGS					
Color	Gas type	Chemical Name	Container sizes	Application	Oil type
$-\overline{h}$	23	Trifluoromethane	9lb 20lb	Ultra Low Temp. Ref.	Polyol Ester
2	134a	Tetrafluoroethane	30lb 125lb 1000lb	A.C. & Med. Temp. Ref	Polyol Ester
1	404A (FX70/HP62)	125/134a/143a blend	24lb, 100lb	Low & Med. Temp. Ref.	Polyol Ester
	507 (AZ50)	125/143a blend	25lb 100lb	Low & Med. Temp. Ref.	Polyol Ester

There is a tremendous effort in developing environmentally safe refrigerants. As the products come to market, MAXR100 will perform tests to determine product compatibility, and will modify the formulation to meet new requirements as needed. MaxR100 has wonderful results with Ammonia system





LAB TEST REPORTS



LAB TEST REPORTS – Doc Ref: 05/2017



MAXR 100 - Metal Compatability Report

MAXR 100 passes the refrigeration metal compatability testing (ASHRE 97) with excellent (Non) corrosive ratings for copper, aluminum and steel.





REPORT

INTERTEK TESTING SERVICES 1717 Arlingate Lane

COLUMBUS, OHIO 43228

ORDER NO.: 3041059-2

Page 1 of 2

DATE: April 29, 2003

REPORT NO. 3041050

RENDERED TO:

Omnitec Inc 1125 Newmarket Drive Virginia Beach, VA 23464

STANDARD AND TEST USED: ASHRAE 97, Sealed Glass Tube Method to Test the Chemical Stability of Material for use within Refrigeration Systems

AUTHORIZATION: The test was authorized by Mr. Charlie Stewart; Purchase Order No.525347.

SPECIMEN DESCRIPTION: The tests were performed on specimens identified by the client as MAXR 100

CONCLUSION: This report describes the two results of Omnitee sample as follows:

Test 1: Conducted in accordance with ASHRAE 97 with a modification of aging temperature, 250°F and a duration of 7 days.

Test 2: Conducted in accordance with ASHRAE 97 with a modification of aging temperature, 375°F for 14 days. and an additional visual observation report at the 7th day.

The test evaluations were conducted at Intertek Testing Services located in Columbus, OH between 4/14/03 and 4/29/03. See appendix A for reported data.

Test Performed by

Aaron Payne Chemist Analytical Laboratory

Report Approved by:

John Senediak Lab Manager Analytical Laboratory



Order No.: 3041050

Page 2 of 2

Appendix A

Results, Physical Properties

Tube ID	Refrigerant	Lubricant	Total Acid Number (mgKOH/g)	Refrigerant Decomposition (% by weight)	Dissolved Copper (ppm)	Dissolved Aluminum (ppm)	Dissolved Iron (ppm)
Omni 7 day T=250F	22	4GS with 5% conc of additive	.97	<.1	1	0	7
Omni 14 day T=375F	22	4GS with 5% conc of additive	1.51	<.1	0	0	12

Results, Visual Inspections

Tube ID	Refrigerant	Lubricant	Additive	Visual Inspection, liquid phase	Visual Inspection, Copper	Visual Inspection, Aluminum	Visual Inspection, Steel
Omni 7 day T=250F	22	4GS with 5% conc of additive	1008	26	1	1	2
Omni 7 day T=375F	22	4GS with 5% conc of additive	1008	36	1	1	2
Omni 14 day T=375F	22	4GS with 5% conc of additive	1008	36	1	1	2

•0 =No change
 •1a = Slight darkening
 •1b = Cloudy 1a
 •2a = Moderate darkening
 •2b = Cloudy 2a
 •3a = Extreme darkening
 •3b = Cloudy 3a
 •4a = Opaque
 <u>Steel Coupon Visual Inspection Legend</u>
 •0 =No change
 •1 = Slight darkening
 •2 = Slight discoloration
 •3 = Moderate copper plating
 •4 = Heavy copper plating

•0 =No change •1 = Slight tarnish •2 = Slight corrosion •3 = Moderate corrosion •4 = Heavy corrosion



LAB TEST REPORT Doc ref: 006/2017





MAXR 100 - Miscibility Report

MAXR 100 passes the lubricant miscibility (the ability of a lubricant to remain in a liquid or vapor state as it travels with the refrigerant gas; thereby providing lubrication to the compressor) testing with the best possible rating of "no change."





REPORT INTERTEK TESTING SERVICES 1717 Arlingate Lane COLUMBUS, OHIO 43228

ORDER NO.: 3030974 Page 1 of 2

DATE: August 27, 2002

REPORT NO. 3030947

RENDERED TO:

Strathmore Holdings, LLC 1244 Executive Blvd. Bldg. C, Suite 102 Chesapeake, VA 23320

STANDARD AND TEST USED: Miscibility of R-22 with mineral oil in 90/10 mixture.

AUTHORIZATION: The test was authorized by Mr. Charles Stewart; Purchase Order No.525322.

SPECIMEN DESCRIPTION: The tests were performed on specimens identified by the client as two samples: Max R 100 (9) and Max R 100 (10).

CONCLUSION: This report describes the results of Strathmore sample lubricants. The test evaluations were conducted at Intertek Testing Services located in Columbus, OH between 8/26/02 and 8/27/02.

Test Performed by:

Aaron Payne Chemist Analytical Laboratory

Report Approved by:

John Senediak Lab Manager Analytical Laboratory

Subject

An independent organization testing for safety, performance, and certification

This report is for the exclusive new of TIS's Client and is provided pursuant to the agreement between ITS and its Client. ITS's responsibility and liability are limited to the terms and conditions of the agreement. ITS usames no fability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its eatirety. Any use of the TS same or one of its must for sale or advectisement of the texted material, product or service must first he approved in writing by ITS. The observations and text results in this report by itself does not imply that the material, product or service more can under an ITS certification program.



Order No.: 3030974

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Appendix A

Miscibility

Tube ID	Refrigerant	Lubricant	Miscibility
1	22	Max R 100 (9)	No change
2	22	Max R 100 (10)	No change

This test evaluates the ability of a lubricant to maintain miscibility (to remain in the same state - i.e. liquid or vapor) with a refrigerant gas throughout the range of test temperatures. The lowest test temperature is -50C.

A result of 'no change' indicates that the lubricant and refrigerant stay in solution with one another across the complete range of test temperatures. Both samples of Max R 100 tested 'no change'.

Subject

a inchrondent amanization testing for safety, performance, and certification

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ENDORSEMENT LETTER FROM OHIO DEPARTMENT OF TRANSPORTATION Doc Ref: 007/2017

OHIO DEPARTMENT OF TRANSPORTATION

District 4, 2088 South Arlington Road, Akron, Ohio 44306

(330) 786-3100 - (800) 603-1054 http://www.dot.state.oh.us Ted Strickland, Governor

Jolene M. Molitoris, Director

Eric M. Czetli District Deputy Director

June 8, 2010

George Nichols Principal Environmental Planner Department of Environmental Programs Metropolitan Washington Council of Governments 777 North Capitol Street, N.E. Suite 300 Washington, DC 20005

Dear Mr. Nichols:

I am pleased to offer my endorsement of the MaxR100TM product as an economic and environmentally friendly solution for HVAC efficiency and equipment restoration.

On April 26, 2010 the State of Ohio Department of Transportation, District 4, began testing the MaxR100TM product on two heat pumps located at the headquarters office building. Heat pump HP-9 was installed in 2009 and HP-18 was original equipment installed in 1995.

Since the installation of MaxR100[™], we have observed and recorded a reduction in compressor noise, reduction in runtime, and an increase in the coefficient of performance (COP) in both heat pumps. While HP-18 has had the largest increase in efficiency, HP-9 has exceeded the original efficiency rating listed by the manufacturer in 2009. The final COP and seasonal energy efficiency rating will be calculated at the conclusion of the test on June 18, 2010 using a certified air balancing report to accurately complete the calculations.

As a professional Facility Manager, this product is the next logical step toward economic HVAC energy efficiency and equipment restoration. It is the intent of our office to take the results of this test and implement a program to install the MaxR100[™] product in every HVAC unit within our jurisdiction during fiscal year 2011.

I would be happy to discuss this product and my recommendation with you in the future.

Sincerely,

Paul Oberdorfer

Facility Manager, District 4

An Equal Opportunity Employer



SAFETY DATA SHEET



SAFETY DATA SHEET (Revised - 10/15/2014) Doc Ref: 008/2017

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Commercial Name: Refrigeration anti-fouling compound Manufactured for: Address:

MAXR – 100A

Trans Bio Energy Company LLC 201 N. Cleveland Massillon Road, Akron Ohio 44333,USA Telephone: +1 330 665 3839 Emergency: +1 757 436 9266

2, COMPOSITION / INFORMATION ON INGREDIENTS

U.S. OSHA hazards communication standard:

Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined NOT to be HAZARDHOUS. The materials in this product are not known to be carcinogenic or contain no greater that 0.1% carcinogenic compounds which would require reporting under OSHA hazard communication standards 28 CFR 1910.1200.

TSCA Inventory status:	All components registered.
ACGIH:	Not listed.
Synthetic base oil:	CAS# 68037-01-4 5mg/M3
Synthetic base oil:	CAS# 68082-78-0 5mg/M3
Additive package:	EP. VI & anti wear proprietary blend – considered
	to Trade Secret according to applicable Federal
	Regulations.

3 HAZARDS IDENTIFICATION

Health: Can cause some transient irritation and burning sensation to eyes and skin.Environment:Regulations forbid the disposal of lubricants into the

environment without special permit.Physiochemical hazards:No particular risk of ignition or explosion.Specific risks:None.

4. FIRST AID MEASURES

Inhalation:	Not concerned.
Skin contact:	Wash with detergent and water.



Eye splashes:

Flush with generous amounts of temperate water for a minimum of 15 minutes. Seek medical help if the problem remains.

Drink water. Do not induce vomiting. Seek medical

Ingestion:

5. FIRE-FIGHTING MEASURES

Recommended to use: Not recommended to use: 6. ACCIDENTAL RELEASE MEASURES CO2, dry powder, foam. Water in a jet.

help.

Personal precautions: Environment protection: Cleaning means:

7. HANDLING AND STORAGE

Handling General: Personal protection:

Storage Recommended conditions:

None necessary in ventilated environments. Avoid pollution of sewers and water. For easy removal, use inert absorbent or sand.

Avoid exposure to temperatures <+5 and >+40°C Avoid prolonged contact with skin. Remove soaked clothes.

Storage temperature +10 to +40°C. Store in closed container, preferably as delivered and separated from strong acids. Storage stability is at least one year.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Technical measures:

Personal protective equipment: Respiratory protection: Hand protection: Exposure should be minimised with technical measures rather than personal protective clothing

None normally needed. Impermeable gloves recommended (e.g. PVC or rubber) Safety goggles recommended. Site protective clothing recommended.

Eye protection: Others:



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Specific gravity
рН
Vapour pressure:
Pour point – ASTM D97
Vapour density:
Floc point ASHRAE 86:
Solubility in water:
Copper corrosion – ASTM D130
Appearance and odour:
Fire Point ASTM D 92

Transparent low viscosity fluid .9930 7 – 7.5 mm Hg 1 -33°C 1 -60°C Insoluble 1A Wheat; mild oily odour 157°C/316 F

10. STABILITY AND REACTIVITY

Stability: Incompatibility: Hazardous reactions or by-products: Stable product under normal conditions. Strong oxidising and reducing agents When burning, may form carbon monoxide.

11. TOXICOLOGICAL INFORMATION

No tests have been performed on the product.

12. ECOLOGICAL INFORMATION

No tests have been performed on the product.

13. DISPOSAL CONSIDERATIONS

Used product: Used packaging: As per existing national regulations. As per existing national regulations.

14. TRANSPORT INFORMATION

The product is not classified as dangerous goods.

16. OTHER INFORMATION

MaxR -100 is a fouling inhibitor and increases refrigerant side heat transfer efficiency in air-
conditioning and refrigeration systems.Symbols:Xi - Irritating.Risk phrases:R 38 - Irritating to skin.

R 41 - Risk of serious damage to eyes.



Safety phrases:

R 52/53 - Harmful to aquatic organisms, may cause longterm adverse effects in the aquatic environment. S 24.25 - Avoid contact with skin and eyes.

S 26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 - Wear suitable gloves and eye/face protection



SAFETY DATA SHEET

(Revised - 10/15/2014) Doc Ref: 009/2017

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Commercial Name:

MAXR – 100 POE Cold Air Refrigeration anti-fouling compound

Manufactured for: Address: Trans Bio Energy Company LLC 201 N. Cleveland Massillon Road, Akron Ohio 44333 USA Telephone: +1 330 665 3839 Emergency: +1 757 436 9266

2.COMPOSITION / INFORMATION ON INGREDIENTS

U.S. OSHA hazards communication standard:

Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined NOT to be HAZARDHOUS. The materials in this product are not known to be carcinogenic or contain no greater that 0.1% carcinogenic compounds which would require reporting under OSHA hazard communication standards 28 CFR 1910.1200.

TSCA Inventory status:	All components registered.
ACGIH:	Not listed.
Synthetic base oil:	CAS# 68037-01-4 5mg/M3
Synthetic base oil:	CAS# 68082-78-0 5mg/M3
Additive package:	EP. VI & anti wear proprietary blend – considered to
	Trade Secret according to applicable Federal Regulations.

3. HAZARDS IDENTIFICATION

Health:	Can cause some transient irritation and burning sensation to eyes and skin.
Environment:	Regulations forbid the disposal of lubricants into the environment without special permit.
Physiochemical hazards: Specific risks:	No particular risk of ignition or explosion. None.



3. FIRST AID MEASURES

Inhalation:	Not concerned.
Skin contact:	Wash with detergent and water.
Eye splashes:	Flush with generous amounts of temperate water for a minimum of 15 minutes. Seek medical help if the problem remains.
Ingestion:	Drink water. Do not induce vomiting. Seek medical help.

5. FIRE-FIGHTING MEASURES

Recommended to use:	CO ₂ , dry powder, foam.
Not recommended to use:	Water in a jet.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	None necessary in ventilated environments.
Environment protection:	Avoid pollution of sewers and water.
Cleaning means:	For easy removal, use inert absorbent or sand.

7. HANDLING AND STORAGE

Handling

General:	Avoid exposure to temperatures <+5 and >+40°C			
Personal protection:	Avoid prolonged contact with skin. Remove soaked clothes.			
Storage Recommended conditions:	Storage temperature +10 to +40°C. Store in closed container, preferably as delivered and separated from strong acids. Storage stability is at least one year.			

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Technical measures:	Exposure should be minimised with technical measures rather than personal protective clothing
Personal protective equipment:	
Respiratory protection:	None normally needed.
Hand protection:	Impermeable gloves recommended (e.g. PVC or rubber)
Eye protection:	Safety goggles recommended.
Others:	Site protective clothing recommended.
Respiratory protection: Hand protection: Eye protection: Others:	None normally needed. Impermeable gloves recommended (e.g. PVC or rubber) Safety goggles recommended. Site protective clothing recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Transparent low viscosity fluid
Specific gravity	0.9930
рН	7 – 7.5
Vapour pressure:	mm Hg 1



Pour point – ASTM D97 Vapour density: Floc point ASHRAE 86: Solubility in water: Copper corrosion – ASTM D130 Appearance and odour: Fire Point ASTM D 92 -33°C 1 -60°C Insoluble 1A Wheat; mild oily odour 157°C/316 F

10. STABILITY AND REACTIVITY

Stability: Incompatibility: Hazardous reactions or by-products: Stable product under normal conditions. Strong oxidising and reducing agents When burning, may form carbon monoxide.

11. TOXICOLOGICAL INFORMATION

No tests have been performed on the product.

12. ECOLOGICAL INFORMATION

No tests have been performed on the product.

13. DISPOSAL CONSIDERATIONS

Used product: Used packaging: As per existing national regulations. As per existing national regulations.

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The product is not classified as dangerous goods.

16. OTHER INFORMATION

MaxR -100 is a fouling inhibitor and increases refrigerant side heat transfer efficiency in airconditioning and refrigeration systems. Symbols: Xi - Irritating.

Symbols:Xi - Irritating.Risk phrases:R 38 - Irritating to skin.R 41 - Risk of serious damage to eyes.R 41 - Risk of serious damage to eyes.R 52/53 - Harmful to aquatic organisms, may causelong-term adverse effects in the aquaticenvironment.Safety phrases:S 24.25 - Avoid contact with skin and eyes.



S 26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 - Wear suitable gloves and eye/face protection

MaxR-100 <u>Shelf</u> Life 18 months. Do not use is the MaxR100 if product has turned a dark golden brown color.



MAXR100[™] Commercial Air Conditioner Treatmet- Saving Examples For Use in : Air Conditioners, Heat Pumps, Refrigeration Systems & Chillers Doc Ref: 010/2017

A treatment of MaxR100[™] brings an air conditioner back to factor efficiency by removing the internal fouling that acts as an insulative factor, which makes the compressor have to work longer and harder to reach the set point.

Typically, an A/C will lose 7% of its efficiency in its first year, 3-5% in the second year, and 2% every year afterwards. This adds substantial cost increases to running a used air conditioner. MaxR100[™] returns the A/C to factory condition, and keeps it there.

Example of MaxR100[™] Energy Savings

The following are examples of savings realized by using MaxR100[™]. Copies of test results are available upon request.

KWH Savings

Equipmen	t
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:	27.09%
:	19.88%
:	22.80%
:	26.10%
:	31.17%
:	35.00%
:	42.00%
:	30.29%
:	35.00%
:	49.82%
	:





TESTIMONIALS



MAXR100[™] Ammonia Compressor Treatment Test CASSIDY'S STUART ICE STUART, FLORIDA

April 17, 2001

Subject: MaxR100A[™] Refrigerant Oil Additive

To Whom It May Concern:

We have installed MaxR100A[™] oil additive throughout our plant, and we are very pleased with the results. Our equipment includes a 50-ton Mycom ammonia system, various Carrier, Copeland, York, and Tecumseh compressors using MP-39, R-22, and R-134A refrigerants.

With the ammonia system, the first thing we noticed was the reduction in noise levels. The system runs much smoother and quieter now. We recovered over 7-gallons of excess oil, which was trapped in the system. This resulted in a better heat exchange and more cooling surface within the evaporator with increased production (see below). We also had a bad leak at the crank seal which stopped two months after installing MaxR100A[™].

For the rest of our equipment we use re-built compressors, which would wear out and had to be replaced on an annual basis. Since installing MaxR100A[™], we have not had to replace a single compressor in over two years. Already, we have doubled the life of the compressors, and saved considerable in maintenance and compressor replacement.

Comparisons showed a 10 psi drop in the high side (refrigerant) pressure and a 5 psi drop on the low side. (This indicates a reduced load on the unit) The freezer temperature dropped 7 degrees within one week. (This unit runs constantly to deliver the coldest freezer room temperature possible) Amperage draw was down 8% on two of the three phases. This is impressive because this is a new re-built compressor.

Results on the ice machines were even more dramatic. The first machine treated with MaxR100A[™] was delivering 67 dumps of ice cubes a day. This was increased to 78 dumps per day, an increase in production of 16%. The level of quality remained high with nice clear ice cubes.

Obviously, we have been able to increase production, while at the same time reduce our cost, resulting in greater savings on energy cost, prolong equipment life, less down time, etc. Over all, we are impressed with the results of MaxR100A[™] and would recommend it highly as a viable source of energy conservation and reduced operating cost.

Sean Cassidy Mark Cassidy III



MAXR100A[™]- Ammonia Compressor Treatment test



Before & After Readings Using MaxR100A[™] & Capacitors Delimex Corporation- Leading maker of premium frozen food Subsidiary of Heinz Foods 7878 Airway Road San Diego, CA 92154

> Refrigeration Amperage Readings

Load	Before	After	Savings	Avg
Location: Engine Room 1				
Screw Compressor 1	199	156	22%	
Screw Compressor 2	302	205	32%	
Screw Compressor 3	242	165	32%	
Screw Compressor 4	296	235	21%	
Location: Engine Room 2				
Screw Compressor 5	303	231	24%	
Screw Compressor 6	309	202	35%	
Screw Compressor 7	182	138	24%	27%
Location: Production				
Spiral Freezer 1 Fan 1	36.5	32	12%	
Spiral Freezer 1 Fan 2	37.3	32.8	12%	
Spiral Freezer 1 Fan 3	36.2	31.7	12%	
Spiral Freezer 2 Fan 1	33.7	27.8	18%	
Spiral Freezer 2 Fan 2	33.2	28.5	14%	
Spiral Freezer 3 Fan 1	27.1	23.2	14%	
Spiral Freezer 3 Fan 2	28.1	23.2	17%	
Spiral Freezer 3 Fan 3	30.8	26	16%	
Spiral Freezer 4 Fan 1	35.8	31.6	12%	
Spiral Freezer 4 Fan 2	32.5	28.1	14%	
Spiral Freezer 4 Fan 3	34.2	29.2	15%	14%



Load	Before	After	Savings	Avg
Location: Mezzanine				
Holding Freezer Evap 1 & 2	6.1	4.8	21%	
Holding Freezer Evap 5 & 6	5.7	4.7	18%	22%
Location: Roof				
Condenser 1 Fan 1	15	11.8	21%	
Condenser 1 Fan 2	20.5	17.7	14%	
Condenser 1 Fan 3	19.5	16.2	17%	
Condenser 2 Fan 1	6.7	2.7	60%	
Condenser 2 Fan 2	7	3	57%	
Condenser 2 Fan 3	6.9	3	57%	
Condenser 1 Water Pump	10.2	9.5	7%	
Condenser 2 Water Pump	11.5	10.5	9%	30%

The use of **MaxR100A[™]** also reduces kWh consumption, equipment wear, latent heat (humidity), equipment noise, maintenance requirements, labor costs, equipment replacement costs, and down time. The net result is better performing equipment, with less headaches and an improved bottom line.





Maxr100A[™] Ammonia Compressor Treatment Test



MAR100A[™] Savings Measurements at a Food Processing Plant

- * The Chillers below are ammonia, M & M Screw, 250 H.P each
- Chiller Systems are 5 years old
- MaxR100A ™ installed September 2002
- The Results were measured 2 to 4 weeks after installation

Load Measured	Amps Before	Amps After	Percentage of Change
Chiller #1	245	190	-22.40%
Chiller #2	246	188	-23.60%
Chiller #3	299	234	-21.70%
Master Air #1	13	10.5	-19.20%
Master Air #2	15	12.5	-16.70%
Cooler #3	35	33.1	-5.40%
Cooler #1	9.7	7.2	-25.80%
Freezer #1	52	44.5	-14.40%
Freezer #2	51.2	43.5	-15.00%
Dairy Cooler	18	12.8	-28.90%
Small A/C	16.7	15.5	-7.20%
Ice Builder #1-A	23.5	17	-27.70%
Ice Builder #1-B	32.4	20.5	-36.70%
Ice Builder #2	54.1	41.4	-23.50%

Average Amps Reduction = 20.6%



Product Testimonial MaxR100 ™ Active Refrigerant Agent



Dear Mr. Davis:

1

I wanted to thank you for your product and helping James River Air Conditioning. This product has increased our profit margin and truly helps our customers. I have tested MaxR against others and none compare. The truth is there is only one product for James River Air Conditioning and that is MaxR.

We had a large commercial job where we needed to remove and install a new unit. Four of our top technicians tried to free a valve on the old unit with no success, but with a single injection of MaxR, the valve was freed and we were able to proceed with the project. This product truly is a "winner."

After putting the product in over 1,000 units in the last four (4) years, we have not heard the first complaint. It is nice to find a product that really works.

Sincerely,

JAMES REVER AIR CONDITIONING COMPANY, INC.

Thomas E. Pue **Residential Operations Managers**





Trans Bio Energy Co, LLC 201 N. Cleveland-Massillon Rd. Akron, OH 44333 Tel: (330) 665-3839 Fax: (330) 665-3820

August 10, 2015

Kompentent Biz Experts, LLC 13137 Palfrey Lane Fairfax, Virginia 22033 U.S.A.

To Whom So Ever it May Concern:

TRANE chillers that have been treated in the U.S. over the past 13 years are in

excess of 1,000 chillers. Includes TRANE chillers for General Electric

manufacturing plants, Hospitals, Hilton Hotels, Holiday Executive Inns, Federal

and State Government buildings. Food processing plants and Pepsi Cola in Central

America.

Sincerely,

-Day Robert L. Davis

Director



www.transbioenergyco.com info@transbioenergyco.com 1





محــلات وصيدليــة مسقط ش م م Muscat Pharmacy & Stores LLC

January 30, 2017

TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s. CITC, Dubal has supplied and installed MAXR100 MO on our 24 TR, DAIKIN Roof top AC system. The trials are conducted between 3rd April 2016 to 20th June 2016.

We have observed energy savings of **24.33%** after installation of MAXR100. We are completely satisfied with the performance of MAXR100 on cur AC units. We also observed that there is substantial improvement in reduction of noise and vibrations of the unit.

NILESH MEHTA Commercial Manager

P.O. Box: 438. Muscat, P.C./ 100. Oman TeL: +968.24814501, Fax: +568.24815201/202 C.R. No.: 1/01091/3



ة صرب ٢٣٨. الرمز اليريدي: ١٠٠٠ مستقط عُمان ماتض: ١- ١٩٤ ١٩٩٩ -، فاكس: ٢- ٢/١١ ١١ ١٩٨ ١٩٩٩ مريض ٢/١١٩١/١

البريد الأكثريةي : E-mail: mpho@mpmet.com





Date: 16th December 2016

TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s. Cosmo Energy (P) Ltd., Delhi has supplied and installed MAXR100 A – active refrigerant egent on our 60 $^{-1}$ 8, Kirlsokar Make, KC 42, ammonia chiller system. The trials were conducted between 4/11/16 to 12/12/16.

We observed the following

- 1. Energy savings at 11.9348% on average power consumption per hour
- a) Before the installation of MAXR100A the average Power consumption was 68.12 Kwh / Hour
- b) After installation of MAXR1C0 A the average Power consumption is 59.99 Kwh/ Hour.
- 2. A Reduction of 14.47% in Current (Amps.)
 - a) Without MAXR100A : 98.52 Amps
 - b) With MAXR100 A : 85.05 Amps

We also observed that there is a significant improvement of reduction in Noise, Vibrations and now the compressor is running smoothly.

We are satisfied with the performance of MAXR100 and we will recommand to other Chiller users for reducing the energy consumption.

AUROBINDO PHARMA LTD

Unit VIII : Survey No. 10 & 13, Geridapotharam Village - 502 319 IDA Kazipally, Jinnaram Mandal, Medak District, T.S. INDIA. Tel : --91 8458 277 114 | 15, Fax : ++91 8458 277 115 Regd. Off.: Not No. 2, Marthuihar, Ameerpet, Hydarabad - 500 038. T.S., INDIA. Tel : --+91 40 6672 5000 Fax --+91 40 2374 3883, 2374 1000

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DERABAD RAIN CANDHI INTERNITIONAL AIRPORT GMR Hyderabad International Airport Limited



Regt: Officer GMR vero lowers, Anjiv Sanchi International Airport. Shamshabad, Hyderabad 500 409. Telangana State, India CIK US2100TG2002PLC04009 +91 40 67.991099/67.990905/67999000
 + 91 40 67.9944/67.495728 🛛 www.bybn axid.oom

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Date: 21st July 2018

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To whom so ever it may concern

This is to certify that M/s. ANNYK INDIA, Mumbai supplied and installed MAXR100 - Active Refrigerant Agent on our 8.5 TR x 2 No's installed in 2008; Voltas make AC packaged units on 12th February, 2016.

- Before the installation of MAXR 100, the energy consumption was at 19.02 Kwh per hour.
- After MAXR 100 installation we have observed that the energy consumption 16.12. KWH per hour

We have observed a savings of 15.25% at the same ambient and set temperature throughout the above trial period.

Yours sincerely er 0ar Technical GMB Hyderapad integrational Aleport Limited

🛐 taxbonic.com/HyderabadArport 🛐 twitter.com/RStAkyd 🔼 youtuke.com/tser/RStAkyderabad



2.23

Airports - Energy | Transportation - Urban Infrastructure | Sports | Foundation





Date : 1/Jan/2016

TO WHOMSOEVER IT MAY CONCERN

This is to certify that we have injected MAXR100 system supplied by Cosmo Pinergy Pvt.Ltd in our 2 TR Blue star solit AC unit, Material Code: Titan- 2201272 00 6834 002 at our Titan Eye, Vikas Marg, Laxmi Nagar showroom. We are pleased to confirm that we observed that the electrical power consumption has been reduced as per their calculation formal and applied test conditions. The pre-test data was taken on 28th and 29th October, 2015 and AC Temp was set to 22 degree Celsius. The post-test data was taken on 20th and 21st November, 2015 and AC Temp was set to 22 degree Celsius and electrical power consumption has been reduced to 15.75 % as per calculation and pattern shown by their Englineers.

We recommend MAXR100 for all AC users to reduce the electrical power consumption and costs.

For TITAN

TITAN CONTRANY LTD. 213-A. Oktita Industrial Estate, Phase-III, New Delni-110020 65520580, 56135000

Name: Naveen Kumar

Designation: Executive Herer of ĽΛ n Signature:

Than Company Linited (January Linited) 213-6, Oktia Industriet Estale, Plane III, New John Linit Color III III 05320600, 66136000 Fastor 11 26221004 Registered Office: 3 Sipcot Industrial Complex Hosti 635 1267 Ninkla Tel 91 Li 324 664 100 Fast 91 4344 270037 (IN: L/499972) 984PLC001456 Corporate Office: 132/133, Dityasree Technopolis, Off HAL Arport Food, Partskie Part, Standing Benge and 260032 India Tel 91 50 660 9000 Fast 91 80 27374001, 27074923 www.titan.com

A TATA Enterprise





Date 14th September, 2015

TO WHOM SO EVER IT MAY CONCERN

This is to certify that we have installed MAXR 100 system in our Mitsubishi make Model PU-4YACD2 air conditioning unit installed for our institute in May 2015. We are pleased to confirm that we observed that the electrical power consumption has been reduced by 21.4% when compared to the energy consumption before the MAXR 100 system installed.

We are very much satisfied with the performance of MAXR100 and recommend to all to use MAXR 100 for reducing the energy costs.

*-

Edward Sobczewski

Chief Executive Officer



اسم كي حي * مرسلاً * سي مربقاً فيني * الإمارات العربية للتحدة • من سنة ٢٨ • ١١ ما ٢٨ و ١٤٤ • ٤٤ ما ٢٤ • ٤٤ ما ٢ درج كي حي * مرسلاً * سي مربقاً فيني * ٢٠٩٢ العربية للتحدة • ٢٠ ما ٢٨ • ١١ ما ٢٥ • ٢٢ ما ٢٤ • ٤٤ ما ٢٤ • ٢٠٩٢ ما درج عند ٢٤ • ٢٠٩٢ ما ٢٤ ما ٢٤ • ٢٠٩٢ ما ٢٤ • ٢٠٩٢ ما ٢٢ • ٢٢ • ٢٢ ما ٢٢ • ٢٢ ما ٢٢ • ٢٠٩٢ ما ٢٢ ما ٢٢ ما ٢٢ ما



Indraprastha Medical Corporation Limited

(Indraprastha Apollo Hospitals, New Delhi - A Joint Sector Venture of Govt. of Delhi) Regd. Office : Sarita Vihar, Delhi-Mathura Road, New Delhi-110 076 (India) Corporate Identity Number : L24232DL1988PLC030958 Phones : 91-11-26925858, 26925801, Fax : 91-11-26823629 E-mail : imcl@apollohospitals.com, Website : apollohospdelhi.com

Date: 21st September, 2015.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that we have installed MaxR100 system supplied by Cosmo Energy Pvt. Ltd in our 1.5 TR Voltas vertigo split ac unit ODU Code: 4511152. Material Code: 4501233 in our Biochemistry lab room number LCMS. We are pleased to confirm that we observed that the electrical power consumption has been reduced as per their calculation format & in applied test conditions. The pretest data was taken on 19th & 20th August 2015 and AC temp was set to 22 degree Celsius. The post test data was taken on 14th to 16th September, 2015 and AC temp was set to 18 degree Celsius and electrical power consumption has been reduced by 24.71 %. Again post test data was taken on 16th at 2.47 PM to 17th September, 2015 at 3.47 pm and the AC temp was set to 22 degree Celsius the electrical power consumption has been reduced by 38% as per the calculation & pattern shown by their engineers.

We also observed that noise has reduced to a certain level.

We recommend MaxR100 for all AC users to reduce the electrical power consumption and costs.

For INDRAPRASTHA APPOLLO HOSPITALS

NAME: Anurag Sharma

DESIGNATION: Sr. Engineer







DCS TECHNO SERVICES PVT. LIMITED (Formerly known as DCS Trading & Services Pvt. Limited)

Plot No.169, Road No.11, Prashasan Nagar, Jubilee Hills, Hyderabad - 500 096, TS, India Tel. : 23558136, Six : +91-40-23541134 Mobile : +91-98490 09875, Email : abhay@destechno.com, www.dests.com CIV : U29219AP2C00PTC035113

Date: 20th August 2014

To Whom So Ever It May Concern

This is to certify that we have installed MaxR100 system in our 4 No's of 1.5 Tons split AC units. We are pleased to confirm that we observed that the electrical power consumption has reduced between 16 to 18% when compared to prior installation of MaxR100 power consumption.

We also observed the noise has been totally reduced.

We recommend MaxR100 for all AC users to reduce the electrical power consumption and costs.

For DCS Techno Services Pvt Ltd \mathcal{U} M.G. Madhu Babu Head-Spl. Products

www.tstenergysaver.com



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