



**43<sup>RD</sup> SESSION OF SCIENTIFIC TECHNICAL COUNCIL OF KAZENERGY ASSOCIATION**  
11<sup>TH</sup> JULY 2023, 1500 HRS (ALMATY)

# SUSTAINABLE AND ESG COMPLIANCE SURFACTANT FORMULATION FOR PRODUCTION, OPERATION AND MAINTENANCE ACTIVITIES IN OIL & GAS, MINING, ENERGY AND MANUFACTURING INDUSTRIES IN KAZAKHSTAN



**PETRONAS**



**VALE**



**TENAGA NASIONAL**



**malaysia airlines**



Driving Sustainable Change



**SIRIM**  
Certified to : SAE AMS 1550B : 2012  
Certification No. : PC011211



# Petronas Brings Its Sustainability Technology Into The Middle Eastern Markets

By Editor - November 7, 2022



Petronas extends its sustainability solutions to the Middle Eastern market by entering into six new supply and commercialisation collaborations at the ongoing Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC)



# 1. INTRODUCTION

**N.H.AB. HAMID**

*(BSc (Hons) Metallurgy & Materials Technology, Aston University, B'ham, UK,  
MPhil. Mech.Eng (Surface Engineering), Loughborough University, UK)*

**MANAGING DIRECTOR/FOUNDER  
EURO-CIRCUIT TECHNOLOGY SDN BHD  
MASAI, JOHOR 81750 MALAYSIA  
noorhisham@eurocircuit.com.my**



## 1.1 Bio-Solv<sup>®</sup> Technology

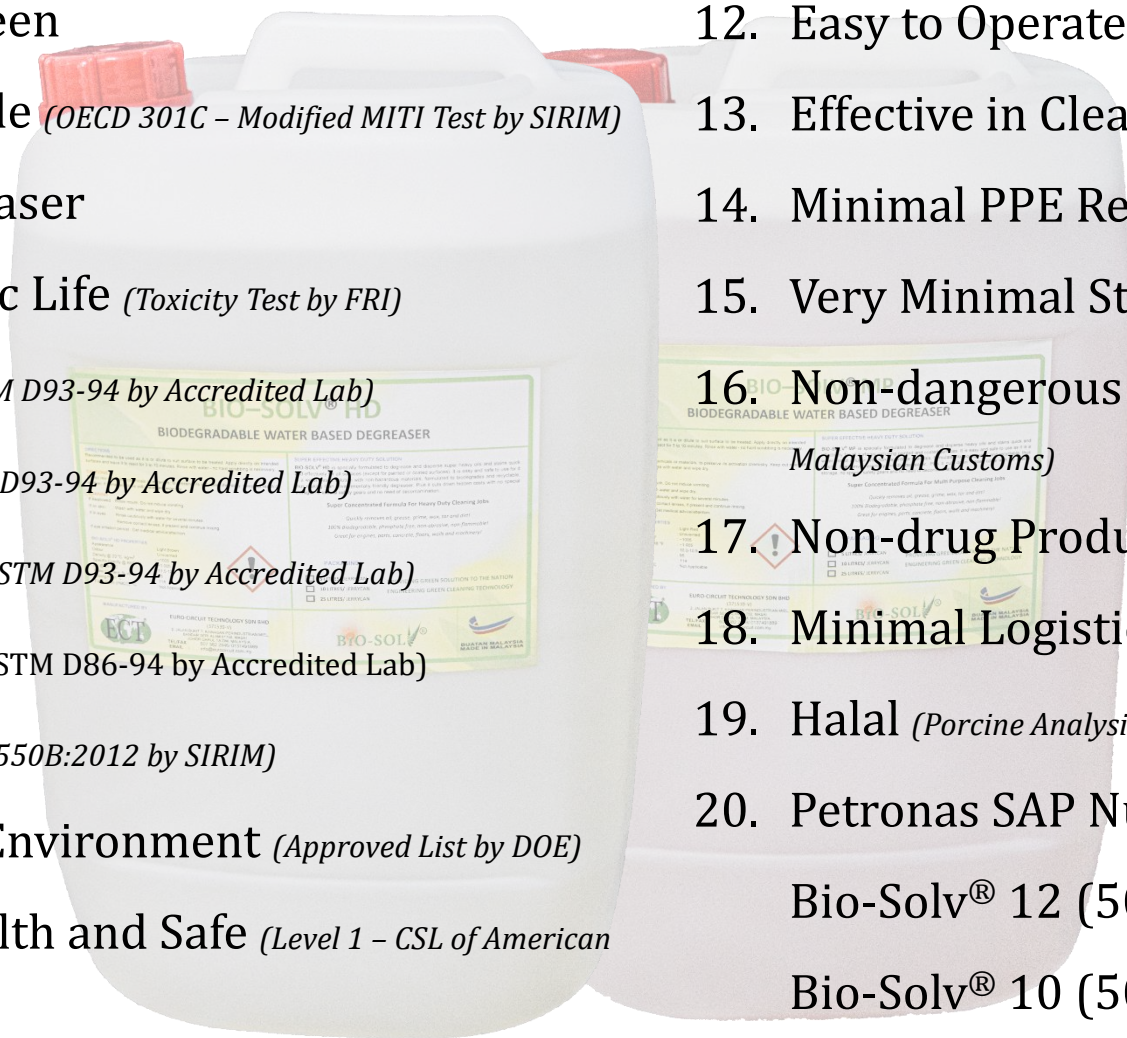


- ***Surfactant technology*** has been widely applied to various industries for hydrocarbon cleaning which attributes to technical, economic, and environmental considerations [1,2]. Yet, these extensively used surfactants are **largely synthesized from raw petrochemicals** [3] which can **possess hazards that contribute to pollution, high industrial safety risks, harmful to the environment** [4], and **severe health implications for humans** [5].
- Whereas, **natural surfactants that are eco-friendly and sustainable would be the best alternative to their synthetic counterparts** [3].
- Bio-Solv<sup>®</sup> is an adaptation of the safe natural surfactant technology.

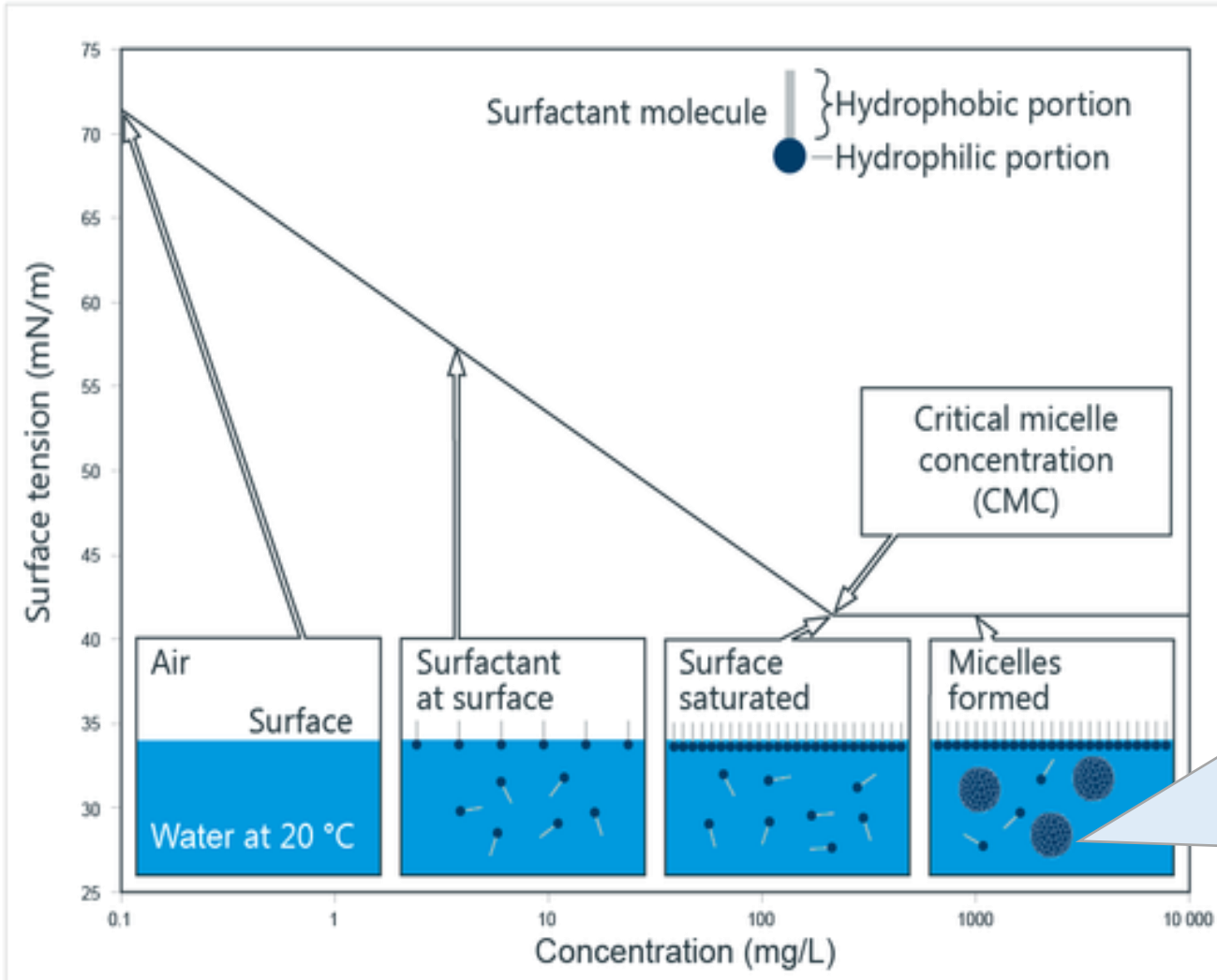
# Versatility of Bio-Solv<sup>®</sup> Technology



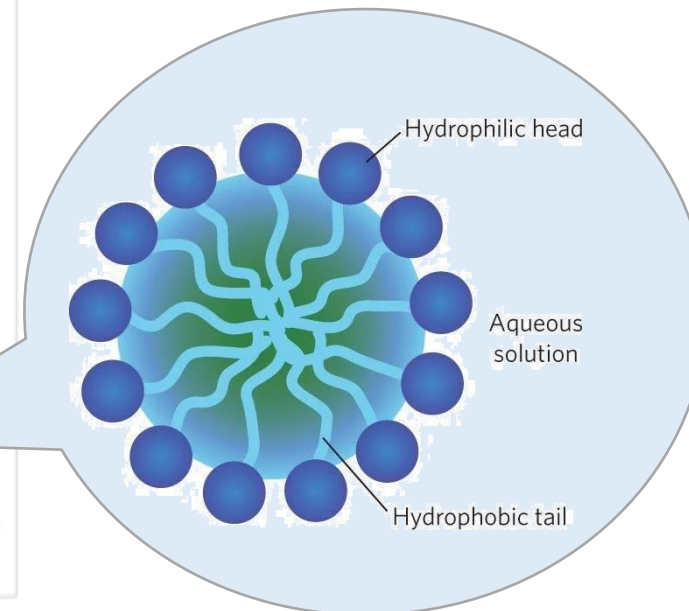
1. Sustainable and Green
2. 100% Biodegradable (*OECD 301C - Modified MITI Test by SIRIM*)
3. Water-based Degreaser
4. Non-toxic to Aquatic Life (*Toxicity Test by FRI*)
5. Non-flammable (*ASTM D93-94 by Accredited Lab*)
6. No Flash Point (*ASTM D93-94 by Accredited Lab*)
7. Non-carcinogenic (*ASTM D93-94 by Accredited Lab*)
8. Non-combustible (*ASTM D86-94 by Accredited Lab*)
9. Non-corrosive (*AMS 1550B:2012 by SIRIM*)
10. Non Hazardous to Environment (*Approved List by DOE*)
11. Not Harmful to Health and Safe (*Level 1 - CSL of American Chemical Society*)
12. Easy to Operate
13. Effective in Cleaning
14. Minimal PPE Requirements
15. Very Minimal Storage Supervision
16. Non-dangerous Goods (*HS Code: 3402-13-9000 Royal Malaysian Customs*)
17. Non-drug Product (*Certified by MOH*)
18. Minimal Logistic Insurance Costs
19. Halal (*Porcine Analysis by Accredited Lab*)
20. Petronas SAP Number:  
Bio-Solv<sup>®</sup> 12 (50874934)  
Bio-Solv<sup>®</sup> 10 (50880044)



# Adaptation of Surfactant Technology



Our technology is SURFACTANT that are able to breakdown oil structure by micro emulsion to a nano size through surface tension alteration that later enable the locally occurrence bacteria to react and consume.



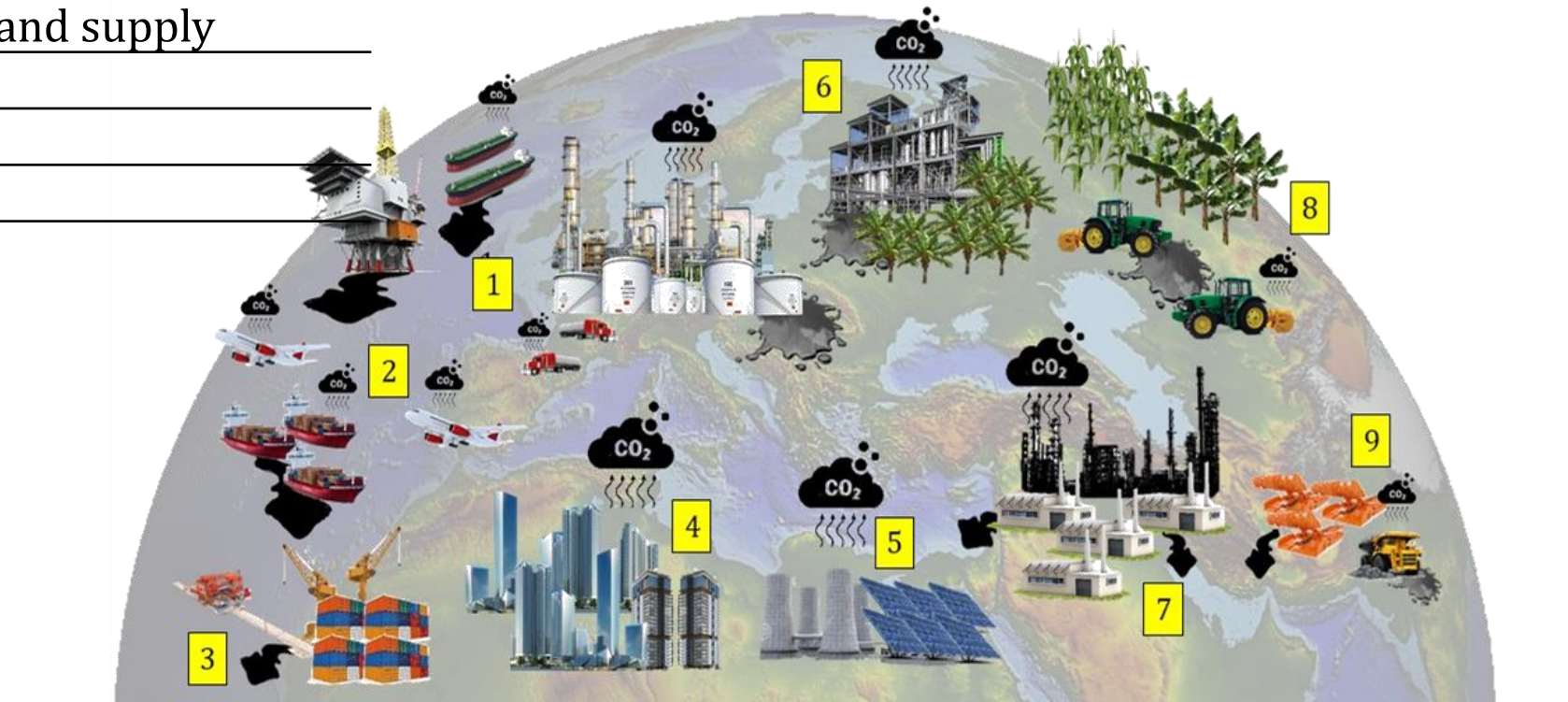


## 1.2 Hydrocarbon Contaminant



- Hydrocarbon contamination on surfaces, soil, water and air in nine major industries in world.

- 1 Oil and gas
- 2 Transportation
- 3 Port
- 4 Hotel and building
- 5 Power generation and supply
- 6 Other industries
- 7 Manufacturing
- 8 Agriculture
- 9 Mining



# Hydrocarbon Contaminant by Industries



No.	Industry	Issue	Conventional solution
1	Oil and gas energy	Oil spill on water	- Treatment using DOE approved dispersants
		Oil-contaminated sand	- Schedule waste management
		Crude oil tank storage sludge	- Manual labour - Schedule waste management
		Oil-contaminated waste water	- Conventional water treatment system
		Hard surface and operation maintenance	- Activity using hazardous products
2	Transportation	Oil spill on water	- Treatment using DOE approved dispersants
		Oil spill on land/road	- Microbes technology or - Contingency response using sand, absorbent pad and etc. - Schedule waste management
		Tank storage sludge	- Manual labour - Schedule waste management
		Hard surface and operation maintenance	- Activity using hazardous products

No.	Industry	Issue	Conventional solution
3	Port	Oil spill on water	- Treatment using DOE approved dispersants
		Storage tank sludge	- Manual labour - Schedule waste management
		Hard surface (civil and plant structures) maintenance	- Activity using hazardous products
4	Hotel and building	Hard surface and operation maintenance	- Activity using hazardous products
5	Energy-power generation and supply	Oil spill on land/road	- Microbes technology - Contingency response using sand, absorbent pad and etc. - Schedule waste management
		Hard surface and operation maintenance	- Activity using hazardous products





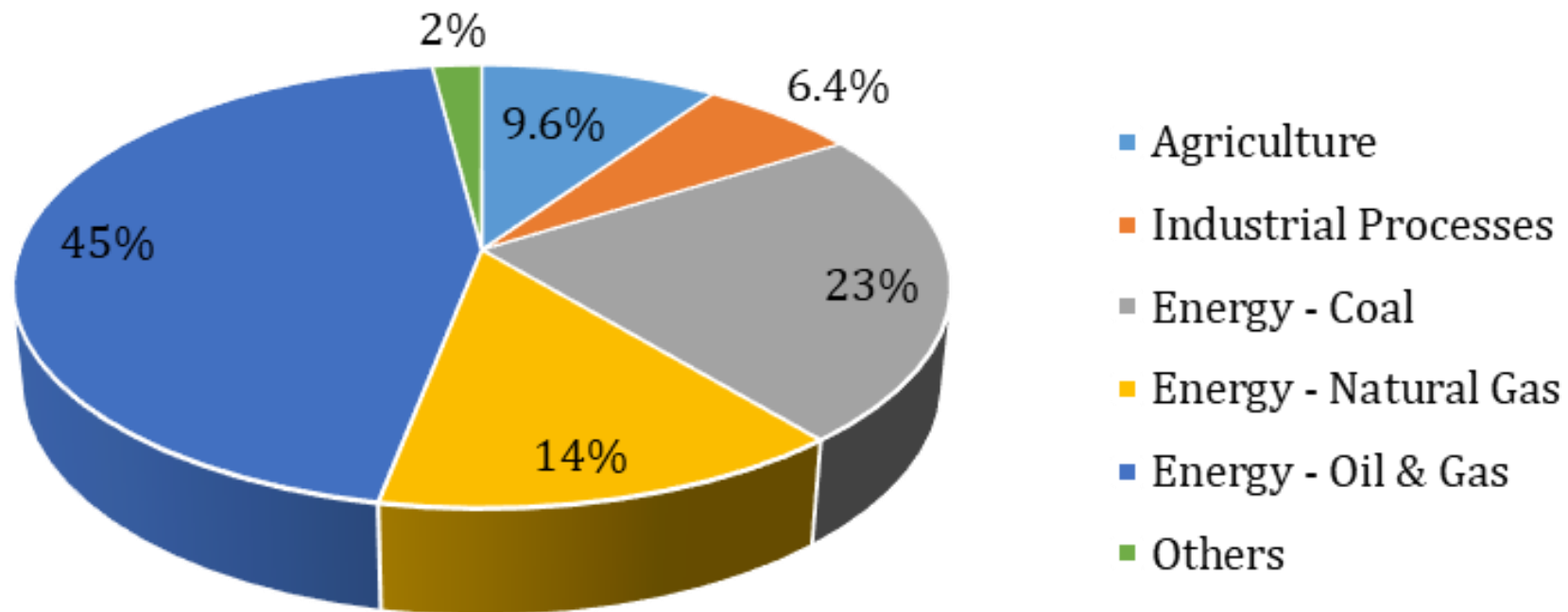
No.	Industry	Issue	Conventional solution
6	Other industry	Oil tank storage sludge	- Manual labour - Schedule waste management
		Oil-contaminated waste water	- Conventional water treatment system
		Hard surface, transportation and operation maintenance	- Activity using ineffective products
7	Manufacturing	<b>Oil-contaminated waste water</b>	- <b>Conventional water treatment system</b>
		<b>Hard surface and operation maintenance</b>	- <b>Activity using hazardous products</b>
8	Agriculture	Oil spill on land/ road	- Microbes technology - Contingency response using sand, absorbent pad and etc. - Schedule waste management
		Oil-contaminated waste water	- Conventional water treatment system
		Hard surface and operation maintenance	- Activity using hazardous products
9	Mining	<b>Mining process</b>	- <b>Degreasing process activity</b>
		<b>Hard surface, equipment and operation maintenance</b>	- <b>Activity using hazardous products</b>

# Carbon Emission



- Whereas, Kazakhstan's carbon dioxide emission is amongst the highest at 11.14 tons per capita with total emission in 2021 was 211,201,350 tons.

CO<sub>2</sub> Emission by Kazakhstan Sectors (%)



## 1.3 Kazakhstan towards Sustainability



Legal information system  
regulatory legal acts  
Republic of Kazakhstan

Ministry of Justice  
Republic of Kazakhstan

Institute of Legislation  
and legal information

Search Official publication UN Documents Research library Scientific review WTO Favorite Cabinet KAZ RUS

### On approval of the Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060

Decree of the President of the Republic of Kazakhstan dated February 2, 2023 № 121

Text Official publication Information Change History Links Download Other

To be published in  
Meetings of acts of the President and  
Government of the Republic  
Kazakhstan

**I DECIDE:**

1. To approve the attached Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060.
2. The Government of the Republic of Kazakhstan shall take measures arising from this Decree.
3. The control over the implementation of this Decree shall be entrusted to the Administration of the President of the Republic of Kazakhstan.
4. This Decree shall enter into force on the day of its signing.

President  
Republic of Kazakhstan

K. Tokayev

APPROVED  
By presidential decree  
Republic of Kazakhstan  
February 2, 2023 № 121

Kazakhstan is focusing in achieving its target of net-zero greenhouse gas emissions by 2060 and intends to implement it through a detailed plan that will identify the policies that will be adopted to achieve climate targets.

"Our goal is to reduce our carbon footprint and use the benefits of sustainable economic growth, improved public health and reduced climate risks. Net investment in low-carbon technologies is estimated at \$610 billion. This will certainly lead to the emergence of new and expanding existing markets and niches for domestic manufacturers, and stimulate the creation of high-skilled jobs," said **Alibek Kuantyrov, Minister of National Economy of the Republic of Kazakhstan.**



## 1.3 Bio-Solv<sup>®</sup> for World Sustainability



### Internationally



- Green Project Management Awards (2021 -2022)
- Professional Certification in Applied Sustainable Practice (2022)
- Green Project Management Global - Certified GPM 360° (2022)
- Best Innovative Product Award at Atyrau Oil and Gas International Exhibition and Conference Kazakhstan (2023)

### Locally





## 2. BIO-SOLV® APPLICATION

## 2.0 Problem Statement or Issue



1. **Energy Oil and Gas Industry** possess quite numerous issues of hydrocarbon and its operation at upstream, midstream, and downstream
2. **Mining Industry** has very specific cleansing challenges with all aspects of cleaning from machines and equipment to consumables and chemicals where strict regulations are in place.
3. **Energy Power Generation Industry** is facing hydrocarbon issues quite widely. Apart from cleaning equipment and machinery needs, soil contamination due to oil spillage is one of the main concerns too.
4. **Manufacturing Industry** also actually needs high attention for safe and effective cleaning demands which is to comply with all precautionary steps due to its hazard presence and sensitive area condition.



## 2.1 Energy Oil and Gas Industry (Petronas)



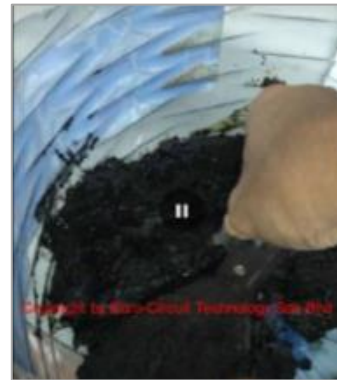
*Sand Cleaning*

*Sludge Softening*

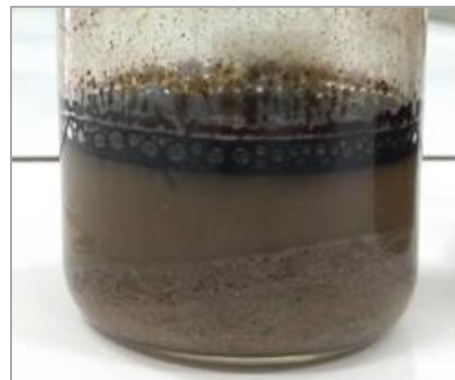
*Viscosity Reducer*

*Deoiler*

Before



After Treatment



## 2.1 Energy Oil and Gas Industry (Petronas)



*Rock Gravel (1)*



Before

*Rock Gravel (2)*



After

*Bioremediation (Crude oil Sludge)*

INITIAL / day 1



DAY 5



After  
Treatment



## 2.2 Mining Industry (Vale Minerals)



*Bearing Casing*



*Bearing Roller*



*Cable Reel Casing*



After  
Treatment





## 2.3 Energy Power Generation Industry (TNB)



*Workshop Door*

*Steel Surface*

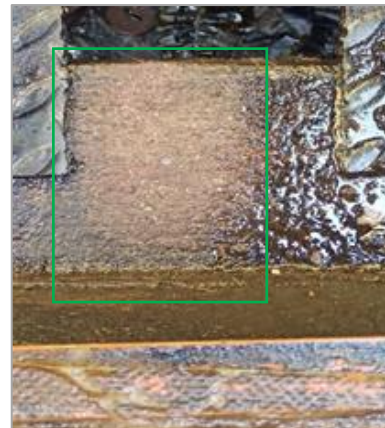
*Concrete Surface*

*Soil Bioremediation*

Before



After Treatment





## 2.4 Manufacturing Industry (Palm Oil Mill)



*Digester Area*

*Painted Pole*

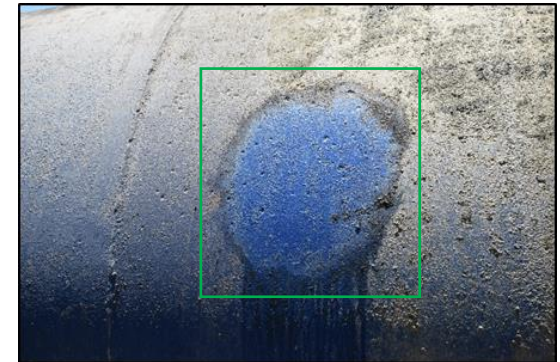
*Component*

*Concrete Surface*

Before



After  
Treatment





# 3. SIGNIFICANCE AND IMPACT



### 3.1 International Ties



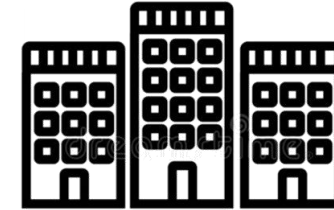
- Sustainability Development
- Technology Collaboration & Pioneer
- Networking to Global Sustainability Grid
- Technology Leverage



### 3.2 Kazakhstan



- Towards Carbon Neutrality by 2060
- ESG Progressive Compliance
- Enhance People's Awareness on Sustainability
- Eco-system Well-being



### 3.4 Private Sector



- Hydrocarbon Problem Solving
- Workers Health Improvement
- Environmental Health and Safety
- Financial Monetary Return





# 4. CERTIFICATION AND RECOGNITION



EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**GPM SUSTAINABILITY AWARDS**  
GPM Global, United States (Malaysia Chapter)



EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**GPM 360°, GPM Global United State**  
(Certified Green Project : Soil Bio-Remediation)





EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**GREEN TECH [MyHIJAU]**

MyHIJAU • PROGRAMME



CERTIFICATE OF ENDORSEMENT

This is to certify that  
Euro-Circuit Technology Sdn Bhd (371539-V)  
10A, Jalan Kebudayaan 1A,  
Taman Universiti,  
81300 Skudai,  
Johor.

has been endorsed with GreenTAG by Malaysian Green Technology Corporation for the following items:

Degreaser



EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**ISO 22000:2018 Food Safety Management System  
[SUSTAINABLE CLEANING SOLUTION]**



**CERTIFICATE OF REGISTRATION**



The Food Safety Management Systems of

**EURO-CIRCUIT TECHNOLOGY  
SDN. BHD.**

No. 2, Jalan Bukit 7, Kawasan Perindustrian MIEL, Bandar Seri Alam, 81750 Masai,  
Johor, Malaysia

has been audited and found to conform to

**ISO 22000:2018**

for the following activities

**Manufacturing of  
Sustainable Cleaning Solution**

Category K: Production of (Bio) Chemicals







EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**INTERNATIONAL BOEING STANDARD**  
(BOEING AMS 1550B : 2012)



No Lesen : PC011211  
Licence No :

**LESEN PENSIJILAN BARANGAN**  
*Product Certification Licence*



SIRIM QAS International Sdn. Bhd. dengan ini menganugerahkan kepada  
SIRIM QAS International Sdn. Bhd. hereby grants to

EURO-CIRCUIT TECHNOLOGY SDN BHD  
NO 2, JALAN BUKIT 7  
KAWASAN PERINDUSTRIAN MIEL  
BANDAR SERI ALAM  
81750 MASAI  
JOHOR, MALAYSIA

Lesen untuk menggunakan Tanda Pensijilan di atas barangan  
a licence to use the Certification Mark on

**WATER-BASED CLEANING PRODUCTS FOR HARD SURFACE MATERIALS FOR  
AIRCRAFT INTERIOR**

Please refer to detail in the SCHEDULE

sebagai mematuhi keperluan  
as complying with

SAE AMS 1550B : 2012



EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**SIRIM BERHAD**  
[READILY (100%) BIODEGRADABLE]



**Pusat Teknologi Alam Sekitar dan Bioproses**  
*Environment and Bioprocess Technology Centre*

Bangunan 15, SIRIM Berhad, Shah Alam, Selangor Darul Ehsan  
Tel : 60-3-5544 6550 / 6598 Faks : 60-3-5544 6590

RESULTS SUMMARY

Company Name	: Euro-Circuit Technology Sdn. Bhd.	Your Ref.No.	-
Address	: 10A, Jln Kebudayaan 1A, Tmn Universiti, 81300 Skudai, Johor	SIRIM Ref.No.	ETC 237/16/883
		Job No.	J125/09
		Report No.	R171/09
		Date of Issue	21/10/2009
Request	: Biodegradation Test for "BIO-SOLV"	No. of pages	3

SAMPLE DESCRIPTION

A liquid sample was received on 30/7/2009 and labeled as "BIO-SOLV".

TEST METHOD

The test was conducted according to the OECD 301C Modified MITI Test (I). Please refer to page 2 for details on the test method.

RESULT

The percentage biodegradation determined by Biological Oxygen Demand (BOD) of "BIO-SOLV" was 100 % at the incubation period of 28 days.

INFERENCE

"BIO-SOLV" was determined as **readily biodegradable** with respect to the organic carbon content by the current OECD 301C Modified MITI Test (I).

*(The inferences expressed herein are outside the scope of accreditation)*







EURO-CIRCUIT TECHNOLOGY SDN. BHD.

## TOXICITY TEST BY FISHERIES RESEARCH INSTITUTE MALAYSIA



**INSTITUT PENYELIDIKAN PERIKANAN**  
(Fisheries Research Institute)

Jabatan Perikanan Malaysia  
11960 Batu Maung, Pulau Pinang,  
MALAYSIA.  
Tel : +604-6263925/26  
Faks : +604-6262210  
E-mail : ifrpes@tin.net.my  
www.fri.gov.my



Director General Department of Environmental  
Ministry of Natural Resources and Environmental,  
Floor 3-7, Room C4, Parcel C, 62662, Putrajaya,  
(Attention : Mr Zulkifli Bin Din) Prk.ML (Peny)-E.128.6 Jld 2  
27/03/2012

Dear Sir,

Toxicity Test Result of BIO-SOLV™, Product of Euro-Circuit Technology Sdn Bhd

Referring to the above matter and the letter AS91/110/612/219 dated 12<sup>th</sup> January 2009, we have conducted the toxicity test to the three samples of cleaner/degreaser with the brand BIO-SOLV 8, BIO-SOLV 10 and BIO-SOLV 12

- We have submitted an earlier report on April 2010, but based on latest revised document in "Green Seal Standards" for degreasers, we upgrade the toxicity rating for the product
- Attached with are the revised result and toxicity rating

**Result** : Average value 48h LC50.....365 ul/L (95% confidence  
upper limit.....403 ul/L  
lower limit.....315 ul/L

**Toxicity Rating** : With reference to Green Seal standards for Degreasing Agents (refer attachment), the value exceeds 100mg/L, thus it passed and is approved to be used as a Degreasing Agent



©2023 Euro-Circuit Technology Sdn Bhd – All Rights Reserved



EURO-CIRCUIT TECHNOLOGY SDN. BHD.

## MINISTRY OF HEALTH MALAYSIA [NON DRUG PRODUCT]



Pihak Berkuasa Kawalan Dadah  
Drug Control Authority  
KEMENTERIAN KESIHATAN MALAYSIA  
MINISTRY OF HEALTH MALAYSIA

Our Ref : (23 ) BPFK/PPP/PPM Jld 26

Date : 14/3/2012

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

### CLASSIFICATION OF PRODUCT

**Product Name** : BIO-SOLV®  
**Company Name** : EURO-CIRCUIT TECHNOLOGY SDN. BHD  
10 A, JALAN KEBUDAYAAN 1A,  
TAMAN UNIVERSITI,  
81300, SKUDAI, JOHOR, MALAYSIA.

With reference to the above, we would like to confirm that the product is not controlled as 'drug' in Malaysia. Therefore, registration with Drug Control Authority, Ministry of Health Malaysia is not required for the said product.

- Should you require any further information, please do not hesitate contact us.

Thank you.



©2023 Euro-Circuit Technology Sdn Bhd – All Rights Reserved





EURO-CIRCUIT TECHNOLOGY SDN. BHD.

DEPARTMENT OF ENVIRONMENT MALAYSIA



Jabatan Alam Sekitar
Department of Environment
Kementerian Tenaga, Sains, Teknologi,
Alam Sekitar & Perubahan Iklim (MESTECC)
Ara 1-4, Podium 2 & 3, Wisma Sumber Asli
No.25, Persiaran Perdana Presint 4
62574 PUTRAJAYA
MALAYSIA

Tel: 03-8871 2000
Faks: 03-8888 1042 / 8888 9987 (Pusataduan)
03-8888 2653 (Integrasi)
03-8888 4151 (Utara)
03-8888 1042 (Komunikasi Strategik)
03-8888 1040 (Pusat)
03-8888 4070 (Air & Maritim)
03-8888 1007 (Pengangkutan)
03-8888 9064 (Teknologi Maklumat)
03-8888 6120 (Bahan Berbahaya)
03-8888 9721 / 1919 (Jasa Operasi)
Laman Web : www.doe.gov.my

Ruj. Tuan :

Ruj. Kami
AS..91/110/612/219 Jld.(34)

22 April 2019

Pengarah Urusan
EURO-CIRCUIT TECHNOLOGY SDN BHD
10 A Jalan Kebudayaan 1A
Taman Universiti
81300 Skudai
JOHOR

CONFIDENTIAL
EURO-CIRCUIT TECHNOLOGY SDN BHD

Faks : 07 - 5214643

Tuan,

PERMOHONAN PENDAFTARAN BIO SOLV®DISPERSANT SEBAGAI
DISPERSANT YANG DILULUSKAN OLEH JABATAN ALAM SEKITAR
MALAYSIA (JAS)

Saya dengan hormatnya diarah merujuk kepada surat tuan rujukan ECT(L)/
ECTDOE/ FRI/ 1709/ bertarikh 13 September 2017 mengenai permohonan
pendaftaran BIO SOLV®DISPERSANT sebagai dispersant yang diluluskan oleh
Jabatan Alam Sekitar Malaysia (JAS) dan surat daripada Institut Penyelidikan
Perikanan, Jabatan Perikanan Malaysia rujukan Prk.ML (peny.) 600-1/1/23
bilangan 10 dan 28 yang masing-masing bertarikh 19 Disember 2017 dan 28 Mac
2019 juga adalah dirujuk.

2. Berdasarkan keputusan ujian yang telah dijalankan oleh Institut
Penyelidikan Perikanan Malaysia (FRI), produk BIO SOLV®DISPERSANT akan
disenaraikan di dalam 'Senarai Dispersant Yang Diluluskan' oleh Jabatan Alam
Sekitar untuk digunakan sebagai dispersant bagi operasi kawalan tumpahan
minyak di laut sahaja.



©2023 Euro-Circuit Technology Sdn Bhd – All Rights Reserved



EURO-CIRCUIT TECHNOLOGY SDN. BHD.

NON-HAZARDOUS/ NON-DANGEROUS GOOD
[ROYAL MALAYSIA CUSTOM, MALAYSIA]

The Malaysian Royal Custom has updated that HS Code 3402 13 9000 has
been changed to 3402 90 1300 whereas the former one is not exist
anymore.
HS Code 3402 90 1300 is classified as surfactant washing agent that is not
fall under dangerous goods.



CONFIDENTIAL
EURO-CIRCUIT TECHNOLOGY SDN BHD

Search Tariff PDK 2022 : PERINTAH DUTI KASTAM 2022
Table with columns: Tariff Type, Search Criteria, Keyword, and a list of HS codes with descriptions.

http://mysstext.customs.gov.my/tariff/

© Hak Cipta Terpelihara 2018, Jabatan Kastam Diraja Malaysia



©2023 Euro-Circuit Technology Sdn Bhd – All Rights Reserved





EURO-CIRCUIT TECHNOLOGY SDN. BHD.

**Eurasian Economic Union (CIS Countries)**  
Export approval to CIS Countries  
(Kazakhstan, Turkmenistan, Kyrgyzstan, Uzbekistan,  
Russia, Armenia and Ukraine)

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ДЕПАРТАМЕНТ ПРОДУКЦИИ И БЕЗОПАСНОСТИ ГОСУДАРСТВЕННОГО САНИТАРНО-ЭПИДЕМИОЛОГИЧЕСКОГО НАДЗОРА  
СЛУЖБА ЗАЩИТЫ И ОХРАНЫ КЫРГЫЗСКОЙ РЕСПУБЛИКИ  
КЫРГЫЗСКАЯ РЕСПУБЛИКА, БИШКЕК

**CONFIDENTIAL**

**EURO-CIRCUIT TECHNOLOGY SDN BHD**

**СВИДЕТЕЛЬСТВО**  
о государственной регистрации

№ KG.11.01.09.015.E.006214.12.17 от 13.12.2017 г.

**Продукция:**  
Чистящее средство "BIO-SOLV 12" (БИО СОЛВ 12). Изготовлена в соответствии с документами. Паспорт безопасности. Изготовитель (производитель): "EURO-CIRCUIT TECHNOLOGY SDN BHD", 10A, Jalan Kebudayaan 1A, Taman Universi, 81300, Skudai, Johor, Malaysia, Малайзия. Получатель: АО "Казахстан Коммерция", г. Алматы, улица Жарокова, дом 257, Казахстан.

**соответствует**  
Единица санитарно-эпидемиологическим и гигиеническим требованиям к товарам, подлежащим санитарно-эпидемиологическому надзору (контролю) Глава II Раздел 5 Подраздел I "Товары бытовой химии"  
прошла государственную регистрацию, внесена в Реестр свидетельств о государственной регистрации и разрешена для производства, реализации и использования  
чистящее обезжиривающее средство для очистки нефтяного и другого промышленного оборудования, моторов, деталей, бетона, полов, стен, кроме лакокрасочных поверхностей

Настоящее свидетельство выдано на основании (перечислить, рассмотренные протоколы исследований, наименование организации (испытательной лаборатории, центра), проводившей исследования, другие рассмотренные документы):  
Протокол испытаний № 7036/86 от 14.11.2017 г. ИЦ РГП на ПВХ "НАУЧНО-ПРАКТИЧЕСКИЙ ЦЕНТР САНИТАРНО-ЭПИДЕМИОЛОГИЧЕСКОЙ ЭКСПЕРТИЗЫ И МОНИТОРИНГА" КЭП МНЗ РК



©2023 Euro-Circuit Technology Sdn Bhd – All Rights Reserved



# 5. CONCLUSION





- Bio-Solv<sup>®</sup> is a technology that holds a key factor in the solution of hydrocarbon issues.
- Adapting the surfactant formulation technology with sustainability and ESG compliance.
- Applicable to various industries with multiple benefits to offer.

In light of Kazakhstan, Bio-Solv<sup>®</sup> could be one of the major factors to aid in achieving carbon neutrality and addressing main hydrocarbon issues in their oil & gas, mining, energy, and manufacturing industries by 2060.

# THANK YOU



## **EURO-CIRCUIT TECHNOLOGY SDN BHD**

NO.2, JALAN BUKIT 7,  
KAWASAN PERINDUSTRIAN MIEL,  
BANDAR SERI ALAM, 81750 MASAI, JOHOR, MALAYSIA

Phone No.:

+6013 749 1889

+607 382 2946

Email:

ectsb.noorhisham@gmail.com

noorhisham@eurocircuit.com.my

Website:

[www.eurocircuit.com.my](http://www.eurocircuit.com.my)

