



SAFETY DATA SHEET

PETROFLO 20Y104E

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture PETROFLO 20Y104E

Date of first issue 03/10/2006

Version number 4.5

Revision date 19/11/2022

Supersedes date 16/07/2020

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Polymerisation inhibitor

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC
Street V. Kadirov 10, city Chirchik, Region Tashkent
Republic of Uzbekistan, 111702
tel : +99871 209 10 40
e-mail : info@pwch.uz
www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, city Chirchik,
Region Tashkent
Republic of Uzbekistan, 111702
+99871 209 10 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.
Aspiration hazard	Category 1	H304 - May be fatal if swallowed and enters airways.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.
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2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 4-Hydroxy-2,2,6,6-tetramethylpiperidin- N-oxyl, Hydrocarbons, C10, aromatics, <1% naphthalene



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Hazard pictograms



Signal word Danger

Hazard statements

H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTRE/doctor.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Glycol in aromatic solvent

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Hydrocarbons, C10, aromatics, <1% naphthalene	50 - < 60	N/A 918-811-1	01-2119463583-34	-	
Classification:	Asp. Tox. 1;H304, STOT SE 3;H336, Aquatic Chronic 2;H411				
2-Methylpentane-2,4-diol (Hexylene glycol)	30 - < 40	107-41-5 203-489-0	01-2119539582-35	603-053-00-3	
Classification:	Skin Irrit. 2;H315, Eye Irrit. 2;H319				
4-Hydroxy-2,2,6,6-tetramethylpiperidin- N-oxyl	3 - < 10	2226-96-2 218-760-9	01-2119968566-20	-	
Classification:	Acute Tox. 4;H302, Eye Dam. 1;H318, STOT RE 2;H373				
Naphthalene	0,25 - < 1	91-20-3 202-049-5	-	601-052-00-2	#
Classification:	Acute Tox. 4;H302, Carc. 2;H351, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

The classification of the above substance(s) is given, including the hazard class, category code and hazard statements which are assigned in accordance with their physicochemical, health and environmental hazards. Please refer to section 16 where the full text of each relevant H-statement is listed.



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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Skin contact	Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation persists after washing.
Ingestion	Rinse mouth. Do not give anything to eat or drink. Do not induce vomiting. Call a physician or poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed Irritant effects.
Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical, carbon dioxide. Foam.
Unsuitable extinguishing media	Water.

5.2. Special hazards arising from the substance or mixture Oxides of carbon and nitrogen evolved in fire.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self contained breathing apparatus. (CEN : EN 137) Protective clothing (CEN : EN 469) Protective gloves (CEN : EN 659) Helmet (CEN : EN 443)
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials. Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear protective clothing, gloves and safety goggles.
For emergency responders	Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Prevent from entering sewers or the immediate environment.
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

6.3. Methods and material for containment and cleaning up Absorb onto inert material and dispose of according to Hazardous Waste Regulations.
Remove small spills with plenty of water.

6.4. Reference to other sections Please refer also to section no. 8 'Exposure controls' for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Combustible.
Do not use around sparks or flames.
Earth containers during filling or discharge when performed at temperatures at or above the product flash point.
Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.



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7.2. Conditions for safe storage, including any incompatibilities	Store in cool, well ventilated area. Store away from oxidisers. Prevent electrostatic charge build-up by using common bonding and grounding techniques.
7.3. Specific end use(s)	Only for professional and industrial users
Shelf life	270 days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Italy. Occupational Exposure Limits

Components	Type	Value	Form
2-Methylpentane-2,4-diol (Hexylene glycol) (CAS 107-41-5)	STEL	10 mg/m ³	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³	
		10 ppm	

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
2-Methylpentane-2,4-diol (Hexylene glycol) (CAS 107-41-5)			
Long-term, Local, Inhalation	49 mg/m ³		
Long-term, Systemic, Dermal	2 mg/kg	250	
Long-term, Systemic, Inhalation	14 mg/m ³	62,5	
Short-term, Local, Inhalation	98 mg/m ³		
4-Hydroxy-2,2,6,6-tetramethylpiperidin- N-oxyl (CAS 2226-96-2)			
Long-term, Systemic, Dermal	0,3 mg/kg	120	
Long-term, Systemic, Inhalation	1,2 mg/m ³	30	
Short-term, Systemic, Dermal	8 mg/kg	60	
Hydrocarbons, C10, aromatics, <1% naphthalene (CAS N/A)			
Long-term, Systemic, Dermal	12,5 mg/kg/day		
Long-term, Systemic, Inhalation	150 mg/m ³		

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
2-Methylpentane-2,4-diol (Hexylene glycol) (CAS 107-41-5)			
Freshwater	0,429 mg/l	1000	
Intermittent releases	4,29 mg/l	100	
Marine water	0,0429 mg/l	10000	
Secondary poisoning	100 mg/kg	90	
Sediment (freshwater)	1,79 mg/kg		
Sediment (marine water)	0,179 mg/kg		
Soil	0,11 mg/kg		
STP	20 mg/l	10	
4-Hydroxy-2,2,6,6-tetramethylpiperidin- N-oxyl (CAS 2226-96-2)			
Freshwater	0,03 mg/l	50	
Intermittent releases	0,54 mg/l	100	
Marine water	3 µg/l	500	



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Sediment (freshwater)	0,126 mg/kg	
Sediment (marine water)	0,0169 mg/kg	
Soil	0,031 mg/kg	
STP	430 mg/l	1

8.2. Exposure controls

Appropriate engineering controls Adequate ventilation to maintain air contaminants below exposure limits.
 Explosion proof exhaust ventilation should be used.
 Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Splash proof chemical goggles.
 Wear safety glasses with side shields (or goggles).
 CEN : EN 166

Skin protection

- Hand protection PVC gloves (Protection against unintentional short-term contact)
 Neoprene gloves (Protection against unintentional short-term contact)
 Nitrile gloves (Protection against unintentional short-term contact)
 Viton gloves (Protection against unintentional short-term contact)
 Penetration time: > 480 min
 Coating thickness: 0.71 mm
 CEN : EN 374-1/2/3/4; EN 420

- Other Protective clothing.
 CEN : EN ISO 13688; EN ISO 6529; EN 14605

Respiratory protection In case of insufficient ventilation, use a breathing mask with filter type: A2-P2
 CEN : EN 136; EN 14387

Thermal hazards Not available.

Environmental exposure controls Prevent from entering in public sewers or the immediate environment.
 Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Colour Dark brown

Physical state Liquid

Odour Slight hydrocarbon

Odour threshold Not available.

pH (concentrated product) Not available.

pH in aqueous solution 7,1 (5% extract)

Melting point/freezing point < -40 °C

Initial boiling point and boiling range 177 °C

Flash point 81 °C P-M(CC)

Evaporation rate < 1 (Ether = 1)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure < 5 mm Hg

Vapour pressure temp. 21 °C

Vapour density > 1 (Air = 1)

Relative density 0,91



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Relative density temperature	21 °C
Solubility	
Solubility (water)	< 0,01 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	11 cps
Viscosity temperature	21 °C
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Pour point	< -37 °C
Shelf life	270 days
VOC	95 % (Calculated)

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Not applicable.
10.4. Conditions to avoid	Keep away from heat.
10.5. Incompatible materials	Avoid contact with strong oxidisers.
10.6. Hazardous decomposition products	Oxides of carbon and nitrogen evolved in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
PETROFLO 20Y104E (Mixture)	Acute Dermal LD50 rabbit: > 2000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 rat: > 2000 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
2-Methylpentane-2,4-diol (Hexylene glycol) (107-41-5)	Acute Dermal LD50 Rabbit: > 5000 mg/kg Acute Oral LD50 Rat: 3700 mg/kg
4-Hydroxy-2,2,6,6-tetramethylpiperidin- N-oxyl (2226-96-2)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Oral LD50 Rat: 1053 mg/kg
Naphthalene (91-20-3)	Acute Dermal LD50 Rabbit: > 16000 mg/kg Acute Oral LD50 Rat: > 2000 mg/kg
Hydrocarbons, C10, aromatics, <1% naphthalene (N/A)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Inhalation LC50 Rat: > 4688 mg/m3 4 hours (Saturated vapor concentration) Acute Oral LD50 Rat: 7050 mg/kg
Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.



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Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Narcotic effects.
May cause drowsiness or dizziness.

Carcinogenicity Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Ingestion Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhoea.

Inhalation Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage.

Symptoms Not available.

Aspiration hazard May be fatal if swallowed and enters airways.

Mixture versus substance information None known.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity No data available

12.2. Persistence and degradability No data available

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow)
Naphthalene 3,3

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contaminated packaging According to Hazardous Waste Regulations.
EWC (European Waste Code) recommendation : 15 01 10
15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
15 01 Packaging (including separately collected municipal packaging waste).
15 01 10 Packaging containing residues of or contaminated by dangerous substances.
Depending on the origin and state of the waste, other EWC numbers may be applicable too.

Disposal methods/information According to Hazardous Waste Regulations.
EWC (European Waste Code) recommendation : 16 03 05
16 Wastes not otherwise specified in the list.
16 03 Off-specification batches and unused products.
16 03 05 Organic wastes containing dangerous substances.
Depending on the origin and state of the waste, other EWC numbers may be applicable too.

SECTION 14: Transport information

ADR

14.1. UN number UN3082



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14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, Mixture)

14.3. Transport hazard class(es)

Class 9

Subsidiary risk -

Tunnel restriction code (-)

14.4. Packing group III

14.5. Environmental hazards Yes

14.6. Special precautions for user Not available.

RID

14.1. UN number UN3082

14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, Mixture)

14.3. Transport hazard class(es)

Class 9

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards Yes

14.6. Special precautions for user Not available.

ADN

14.1. UN number UN3082

14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, Mixture)

14.3. Transport hazard class(es)

Class 9

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards Yes

14.6. Special precautions for user Not available.

IATA

14.1. UN number UN3082

14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, Mixture)

14.3. Transport hazard class(es)

Class 9

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards Yes

ERG Code Not available.
14.6. Special precautions for user Not available.

IMDG

14.1. UN number UN3082

14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrocarbons, C10, aromatics, <1% naphthalene, Mixture)

14.3. Transport hazard class(es)

Class 9

Subsidiary risk -

14.4. Packing group III

14.5. Environmental hazards

Marine pollutant Yes

Ems F-A, S-F



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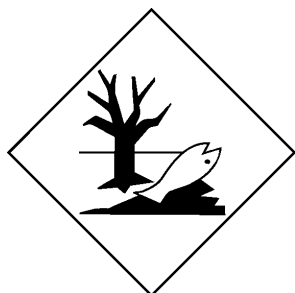
14.6. Special precautions for user Not available.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code This substance/mixture is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID



Marine pollutant



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Naphthalene (CAS 91-20-3)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.



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Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Naphthalene (CAS 91-20-3)

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Naphthalene (CAS 91-20-3)

National regulations Not available.

15.2. Chemical safety assessment Not available.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

List of abbreviations

EC-No: European Commission Number
COD: Chemical Oxygen Demand
IATA: International Air Transport Association
CAS: Chemical Abstract Service.
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
CEN: European Committee for Standardization (Comité Européen de Normalisation).
TWA: Time Weighted Average.
STEL: Short-term Exposure Limit.
LD50: Lethal Dose 50%.
LC50: Lethal Concentration 50%.
EC50: Effective Concentration 50%.
NOEL: No observed effect level.
BOD: Biochemical oxygen demand.
TOC: Total Organic Carbon.
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).
IMDG Code: International Maritime Dangerous Goods Code.
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

References

Information on evaluation method leading to the classification of mixture

Safety data sheets of raw materials.

The physical, health and environmental hazards of this mixture are assessed by applying the classification criteria for each hazard class or differentiation in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 (CLP).

Full text of any H-statements not written out in full under Sections 2 to 15

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure by ingestion.
H400 Very toxic to aquatic life.



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Revision information	H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. SECTION 8: Exposure controls/personal protection: - Hand protection Physical & Chemical Properties: Multiple Properties Toxicological Information: Toxicological Data SECTION 11: Toxicological information: Acute toxicity SECTION 11: Toxicological information: Carcinogenicity SECTION 11: Toxicological information: Germ cell mutagenicity SECTION 11: Toxicological information: Reproductive toxicity SECTION 11: Toxicological information: Respiratory or skin sensitisation SECTION 11: Toxicological information: Specific target organ toxicity - repeated exposure Transport Information: Material Transportation Information SECTION 16: Other information: Further information
Training information	Provide training on safe handling while considering the type of application and exposure scenarios.
Based on EC Directive / Regulations	(EC) No 1907/2006 (REACH) (EC) No 1272/2008 (EU) No 1357/2014 (EU) 2015/830
Further information	This information is based on our current knowledge and is intended to describe the product for the purpose of safety requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Correction in Section: 8,11,16