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SAFETY DATA SHEET

PETROFLO 20Y104E (PetroKare PK 40 AF)

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 (PetroKare PK 40 AF)
Date of first issue	03/10/2006
Version number	4.5
Revision date	19/11/2020
Supersedes date	16/07/2019

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
Address: Street V. Kadirov 10, Chirchik city,
Tashkent Region, Republic of Uzbekistan, 111727
Tel: +99871 209 10 40
Email address: info@pwch.uz
www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, Chirchik city,
Tashkent Region,
Republic of Uzbekistan, 111727

Tel: +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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Version: 4.5
Effective date: 19/11/2020
Previous Date: 16/07/2019

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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

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

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2-Methylpentane-2,4-diol (Hexylene glycol) (CAS 107-41-5)	STEL	123 mg/m ³
	TWA	25 ppm
		123 mg/m ³
		25 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

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling Time
Naphthalene (CAS 91-20-3)	4 umol/mol	1-Hydroxypyrene	Creatinine in urine	*

* - For sampling details, please see the source document.

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		



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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
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.



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Vapour pressure	< 5 mm Hg
Vapour pressure temp.	21 °C
Vapour density	> 1 (Air = 1)
Relative density	0,91
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 (PetroKare PK 40 AF) (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/m ³ 4 hours (Saturated vapor concentration) Acute Oral LD50 Rat: 7050 mg/kg

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



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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.
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.



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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
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



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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	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
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)



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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.

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).
 Safety data sheets of raw materials.

References

Information on evaluation method leading to the classification of mixture

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).



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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.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Revision information

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

Correction in Section: 8,11,16