

MLS 5037 Polyol

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

1.1 Product identifier

Trade name : MLS 5037 Polyol

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

Use of the Substance/Mixture : Resin

1.3 Details of the supplier of the safety data sheet

Company : Mouldlife Limited

Address : Miro House, Western Way (west), Bury St Edmunds, Suffolk

Telephone : 01638 750 679

E-mail address : info@mouldife.co.uk

1.4 Emergency telephone number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Reproductive toxicity, Category 2	H361d: Suspected of damaging the unborn child.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P391 Collect spillage.

Hazardous components which must be listed on the label:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate

Distillates (petroleum), hydro- treated light; Kerosine — unspecified

Bis(isopropyl)naphthalene

2.3 Other hazards

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
1-Isopropyl-2,2-dimethyltrimethylene	6846-50-0 229-934-9	Repr. 2; H361d Aquatic Chronic 3;	>= 20 - < 25

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diisobutyrate	01-2119451093-47	H412	
Ammonia, propoxylated	75790-79-3 500-261-5 -	Eye Irrit. 2; H319	>= 10 - < 20
Distillates (petroleum), hydro-treated light; Kerosine — unspecified	64742-47-8 265-149-8 649-422-00-2 01-2119456620-43	Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 10 - < 20
Ethylenediamine, propoxylated	25214-63-5 500-035-6 01-21194711485-32	Eye Irrit. 2; H319	>= 10 - < 20
1,1',1'',1'''- Ethylenedinitrilotetrapropan-2-ol	102-60-3 203-041-4 01-2119552434-41	Eye Irrit. 2; H319	>= 1 - < 10
Bis(isopropyl)naphthalene	38640-62-9 254-052-6 01-2119565150-48	Asp. Tox. 1; H304 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 2.5 - < 10
Terphenyl, hydrogenated	61788-32-7 262-967-7 01-2119488183-33	Aquatic Chronic 4; H413	>= 2.5 - < 10
Terphenyl	26140-60-3 247-477-3 01-2119488220-43	Acute Tox. 4; H332 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Chronic aquatic toxicity): 10	>= 0.25 - < 1
1-Methyl-2-pyrrolidone	872-50-4 212-828-1 606-021-00-7 01-2119472430-46	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Repr. 1B; H360D STOT SE 3; H335	>= 0.1 - < 0.3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Treat symptomatically.
Get medical attention if symptoms occur.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
- In case of skin contact : If skin irritation persists, call a physician.

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If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon oxides
Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : No data is available on the product itself.

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Further information

: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and

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contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., See Section 1 for emergency contact information.,
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours or spray mist.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Keep in properly labelled containers.

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Advice on common storage : For incompatible materials please refer to Section 10 of this SDS.

Further information on storage stability : Stable under normal conditions.

Recommended storage temperature : 2 - 40 °C

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Terphenyl, hydrogenated	61788-32-7	TWA	2 ppm 19 mg/m ³	2017/164/EU
Further information	Indicative			
		STEL	5 ppm 48 mg/m ³	2017/164/EU
Further information	Indicative			
		TWA	2 ppm 19 mg/m ³	GB EH40
		STEL	5 ppm 48 mg/m ³	GB EH40
Terphenyl	26140-60-3	STEL	0.5 ppm 4.8 mg/m ³	GB EH40
1-Methyl-2-pyrrolidone	872-50-4	TWA	10 ppm 40 mg/m ³	2009/161/EU
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	20 ppm 80 mg/m ³	2009/161/EU
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	10 ppm 40 mg/m ³	GB EH40
Further information	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	20 ppm 80 mg/m ³	GB EH40
Further information	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

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Substance name	End Use	Exposure routes	Potential health effects	Value
bis(isopropyl)naphthalene	Workers	Inhalation	Systemic effects, Long-term exposure	30 mg/m ³
	Workers	Dermal	Systemic effects, Long-term exposure	4.3 mg/kg bw/day
	Consumers	Inhalation	Systemic effects, Long-term exposure	7.4 mg/m ³
	Consumers	Dermal	Systemic effects, Long-term exposure	2.1 mg/kg bw/day
	Consumers	Oral	Systemic effects, Long-term exposure	2.1 mg/kg bw/day
2,6-di-tert-butyl-p-cresol	Workers	Dermal	Systemic effects, Long-term exposure	8.3 mg/kg bw/day
	Workers	Inhalation	Systemic effects, Long-term exposure	5.8 mg/m ³
	Consumers	Dermal	Systemic effects, Long-term exposure	5 mg/kg bw/day
	Consumers	Inhalation	Systemic effects, Long-term exposure	1.74 mg/m ³
1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol	Workers	Inhalation	Long-term systemic effects	29.4 mg/m ³
	Workers	Dermal	Long-term systemic effects	4.2 mg/kg
	Consumers	Inhalation	Long-term systemic effects	8.7 mg/m ³
	Consumers	Dermal	Long-term systemic effects	2.5 mg/kg
	Consumers	Oral	Long-term systemic effects	2.5 mg/kg
1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate	Workers	Inhalation	Long-term systemic effects	110 mg/m ³
	Workers	Dermal	Long-term systemic effects	31.2 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32.6 mg/m ³
	Consumers	Oral	Long-term systemic effects	18.8 mg/kg
	Consumers	Dermal	Long-term systemic effects	18.8 mg/kg
Bis(isopropyl)naphthalene	Workers	Inhalation	Systemic effects, Long-term exposure	30 mg/m ³
	Workers	Dermal	Systemic effects, Long-term exposure	4.3 mg/kg bw/day
	Consumers	Inhalation	Systemic effects, Long-term exposure	7.4 mg/m ³

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	Consumers	Dermal	Systemic effects, Long-term exposure	2.1 mg/kg bw/day
	Consumers	Oral	Systemic effects, Long-term exposure	2.1 mg/kg bw/day
Terphenyl, hydrogenated	Workers	Inhalation	Long-term systemic effects	8.38 mg/m ³
	Workers	Inhalation	Long-term local effects	83.8 mg/m ³
	Workers	Dermal	Long-term systemic effects	46.3 mg/kg
	Workers	Dermal	Long-term local effects	0.2 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	2.5 mg/m ³
	Consumers	Inhalation	Long-term local effects	25 mg/m ³
	Consumers	Dermal	Long-term systemic effects	27.8 mg/kg
	Consumers	Dermal	Long-term local effects	1.23 mg/m ³
	Consumers	Oral	Long-term systemic effects	0.3 mg/kg
1-Methyl-2-pyrrolidone	Workers	Inhalation	Long-term local effects	40 mg/m ³
	Workers	Inhalation	Long-term systemic effects	14.4 mg/m ³
	Workers	Dermal	Long-term systemic effects	4.8 mg/kg
	Consumers	Inhalation	Long-term local effects	4.5 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	3.6 mg/m ³
	Consumers	Dermal	Long-term local effects	2.4 mg/kg
	Consumers	Oral		0.85 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
bis(isopropyl)naphthalene	Fresh water	0.26 µg/l
Remarks:	Assessment Factors	
	Marine water	0.026 µg/l
	Assessment Factors	
	Sewage treatment plant	0.15 mg/l
	Assessment Factors	
	Fresh water sediment	0.94 mg/kg
	Equilibrium method	

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	Marine sediment	0.094 mg/kg
	Equilibrium method	
	Soil	0.1872 mg/kg
	Equilibrium method	
	Secondary Poisoning	25 mg/kg
	Assessment Factors	
2,6-di-tert-butyl-p-cresol	Fresh water	0.004 mg/l
	Marine water	0.0004 mg/l
	Freshwater - intermittent	0.004 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	1.29 mg/kg
	Soil	1.04 mg/kg
	Secondary Poisoning	16.7 mg/kg
1,1',1'',1'''- Ethylenedinitrilotetrapropan-2-ol	Fresh water	0.085 mg/l
	Assessment Factors	
	Marine water	0.0085 mg/l
	Assessment Factors	
	Freshwater - intermittent	1.51 mg/l
	Assessment Factors	
	Fresh water sediment	0.193 mg/kg
	Equilibrium method	
	Marine sediment	0.0193 mg/kg
	Equilibrium method	
	Soil	0.0183 mg/kg
	Equilibrium method	
1-Isopropyl-2,2- dimethyltrimethylene diisobutyrate	Fresh water	0.014 mg/l
	Marine water	0.0014 mg/l
	Fresh water sediment	1.15 mg/kg
	Soil	0.926 mg/kg
	Sewage treatment plant	3 mg/l
Bis(isopropyl)naphthalene	Fresh water	0.26 µg/l
	Assessment Factors	
	Marine water	0.026 µg/l

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	Assessment Factors	
	Sewage treatment plant	0.15 mg/l
	Assessment Factors	
	Fresh water sediment	0.94 mg/kg
	Equilibrium method	
	Marine sediment	0.094 mg/kg
	Equilibrium method	
	Soil	0.1872 mg/kg
	Equilibrium method	
	Secondary Poisoning	25 mg/kg
	Assessment Factors	
Terphenyl, hydrogenated	Fresh water	0 mg/l
	Marine water	0 mg/l
	Intermittent use/release	0.001 mg/l
	Sewage treatment plant	10.3 mg/l
	Fresh water sediment	3.16 mg/kg
	Marine sediment	0.316 mg/kg
	Soil	0.631 mg/kg
	Secondary Poisoning	2.22 mg/kg
1-Methyl-2-pyrrolidone	Fresh water	0.25 mg/l
	Marine water	0.025 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	1.09 mg/kg
	Marine sediment	0.109 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : butyl-rubber
Break through time : > 8 h

Material : Ethyl Vinyl Alcohol Laminate (EVAL)
Break through time : > 8 h

Material : Nitrile rubber

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Break through time : 10 - 480 min

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : yellow

Odour : slight

Odour Threshold : No data is available on the product itself.

pH : No data is available on the product itself.

Freezing point : No data is available on the product itself.

Melting point : No data is available on the product itself.

Boiling point : > 200 °C

Flash point : 100 °C
Method: estimated, closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Burning rate : No data is available on the product itself.

Upper explosion limit / Upper flammability limit : No data is available on the product itself.

Lower explosion limit / Lower flammability limit : No data is available on the product itself.

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Vapour pressure : < 0.00001 hPa (25 °C)

Relative vapour density : No data is available on the product itself.

Relative density : No data is available on the product itself.

Density : 0.98 g/cm³ (25 °C)

Solubility(ies)
Water solubility : practically insoluble (20 °C)

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-octanol/water : No data is available on the product itself.

Auto-ignition temperature : No data is available on the product itself.

Decomposition temperature : > 200 °C

Viscosity
Viscosity, dynamic : 100 - 320 mPa.s (25 °C)

Explosive properties : No data is available on the product itself.

Oxidizing properties : No data is available on the product itself.

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition : carbon monoxide

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products carbon dioxide
Nitrogen oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 425
Assessment: The substance or mixture has no acute oral toxicity

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Acute oral toxicity : LD50 (Rat, male and female): > 15,000 mg/kg
Method: OECD Test Guideline 423

LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401

Ethylenediamine, propoxylated:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:

Acute oral toxicity : LD50 (Rat, male and female): 2,890 mg/kg
Method: OECD Test Guideline 401

Bis(isopropyl)naphthalene:

Acute oral toxicity : LD50 (Rat, male and female): 4,130 - 4,320 mg/kg
Method: OECD Test Guideline 401
Assessment: The component/mixture is minimally toxic after single ingestion.

Terphenyl, hydrogenated:

Acute oral toxicity : LD50 (Rat, male and female): > 10,000 mg/kg
Method: OECD Test Guideline 401

1-Methyl-2-pyrrolidone:

Acute oral toxicity : LD50 (Rat, male and female): 4,150 mg/kg

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Method: OECD Test Guideline 401

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Acute inhalation toxicity : LC50 (Rat): > 5.3 mg/l
Exposure time: 6 h
Test atmosphere: vapour

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Acute inhalation toxicity : LC50 (Rat, male): > 5600 mg/m³
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

LC50 (Rat, male): > 9300 mg/m³
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Bis(isopropyl)naphthalene:

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.64 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Terphenyl, hydrogenated:

Acute inhalation toxicity : LC50 (Rat, male and female): > 4.7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity

Terphenyl:

Acute inhalation toxicity : LC50 (Rat, male and female): > 3.8 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal

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toxicity

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402

Ethylenediamine, propoxylated:

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Bis(isopropyl)naphthalene:

Acute dermal toxicity : LD50 (Rat, male and female): > 4,500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Terphenyl, hydrogenated:

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: no
Assessment: The substance or mixture has no acute dermal toxicity

Terphenyl:

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

1-Methyl-2-pyrrolidone:

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation

Components:

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1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Irritating to skin.

GLP: yes

Ethylenediamine, propoxylated:

Species: Rabbit

Method: OECD Test Guideline 404

Remarks: slight irritation

Bis(isopropyl)naphthalene:

Species: Rabbit

Exposure time: 4 h

Assessment: No skin irritation

Method: OECD Test Guideline 404

Result: Normally reversible injuries

Terphenyl, hydrogenated:

Species: Rabbit

Exposure time: 24 h

Method: Other guidelines

Result: No skin irritation

1-Methyl-2-pyrrolidone:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Mild skin irritation

Serious eye damage/eye irritation

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Species: Rabbit

Method: OECD Test Guideline 405

Result: No eye irritation

Ammonia, propoxylated:

Result: Eye irritation

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Species: Rabbit

Assessment: No eye irritation

Method: OECD Test Guideline 405

Result: No eye irritation

Ethylenediamine, propoxylated:

Species: Rabbit

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Method: OECD Test Guideline 405
Result: Eye irritation
GLP: yes

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:
Species: Rabbit
Assessment: Irritant
Result: Irritating to eyes.

Bis(isopropyl)naphthalene:
Species: Rabbit
Assessment: No eye irritation
Method: OECD Test Guideline 405
Result: No eye irritation

Terphenyl, hydrogenated:
Species: Rabbit
Method: Draize Test
Result: No eye irritation
GLP: no

1-Methyl-2-pyrrolidone:
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irritating to eyes.

Respiratory or skin sensitisation

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Exposure routes: Skin
Species: Humans
Result: Does not cause skin sensitisation.

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:
Exposure routes: Skin
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Ethylenediamine, propoxylated:
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Bis(isopropyl)naphthalene:
Test Type: Maximisation Test
Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

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Terphenyl, hydrogenated:
Exposure routes: Skin
Species: Humans
Method: Patch Test 24 Hrs.
Result: Does not cause skin sensitisation.

1-Methyl-2-pyrrolidone:
Exposure routes: Skin
Species: Mouse
Method: OECD Test Guideline 429
Result: Does not cause skin sensitisation.

Components:

Bis(isopropyl)naphthalene:
Assessment: May be harmful if swallowed or if inhaled.
Does not cause skin sensitisation.

Terphenyl, hydrogenated:
Assessment: Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

: Concentration: 100 - 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: Directive 67/548/EEC, Annex, B.13/14
Result: negative

: Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Method: OECD Test Guideline 476
Result: negative

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:
Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

: Concentration: 8 - 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

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: Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative

: Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

: Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Ethylenediamine, propoxylated:
Genotoxicity in vitro

: Concentration: 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

: Concentration: 2800 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

: Concentration: 2800 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Bis(isopropyl)naphthalene:
Genotoxicity in vitro

: Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Concentration: 9.5 - 60 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

: Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 92 mg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

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: Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Concentration: 40 - 60 mg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Terphenyl, hydrogenated:
Genotoxicity in vitro

: Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 482
Result: negative

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

: Metabolic activation: with and without metabolic activation
Method: In vitro mammalian cell gene mutation test
Result: negative

Terphenyl:
Genotoxicity in vitro

: Test Type: unscheduled DNA synthesis assay
Test system: mammalian liver cells
Concentration: 0.1 - 2ug/ml
Method: OECD Test Guideline 482
Result: negative
GLP: yes
Remarks: In vitro tests did not show mutagenic effects

1-Methyl-2-pyrrolidone:
Genotoxicity in vitro

: Concentration: 10000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

: Concentration: 5 mg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

: Concentration: 4 mg/ml
Method: OECD Test Guideline 482
Result: negative

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Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Genotoxicity in vivo : Application Route: Oral
Dose: 1.25 - 5 g/kg
Method: OECD Test Guideline 474
Result: negative

Application Route: Inhalation
Dose: 300 - 900 ppm
Method: OECD Test Guideline 478
Result: negative

Bis(isopropyl)naphthalene:

Genotoxicity in vivo : Test Type: Micronucleus test
Test species: Mouse (male and female)
Application Route: Intraperitoneal injection
Dose: 1.92 g/kg
Method: OECD Test Guideline 474
Result: negative

Terphenyl, hydrogenated:

Genotoxicity in vivo : Test species: Rat
Cell type: Bone marrow
Dose: 250, 1250, 2500 mg/kg bw
Method: OECD Test Guideline 475
Result: negative

Terphenyl:

Genotoxicity in vivo : Test Type: in vivo assay
Test species: Rat (male and female)
Cell type: Bone marrow
Application Route: Subcutaneous
Exposure time: 6-24 h
Dose: 0-500 mg/kg bw
Method: OECD Test Guideline 475
Result: In vivo tests did not show any chromosomal changes.
GLP: yes

1-Methyl-2-pyrrolidone:

Genotoxicity in vivo : Application Route: Oral
Dose: 3800 mg/kg
Method: OECD Test Guideline 474
Result: negative

Application Route: Oral
Dose: 3800 mg/kg
Method: OECD Test Guideline 475

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Result: negative

Components:

Bis(isopropyl)naphthalene:
Germ cell mutagenicity-
Assessment : Tests on bacterial or mammalian cell cultures did not show
mutagenic effects.

Carcinogenicity

Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:
Species: Rat, male and female
Application Route: Inhalation
Exposure time: 105 weeks
Dose: ≥ 2200 mg/m³
Frequency of Treatment: 6 hour
Method: OECD Test Guideline 453
Result: negative

Species: Rat, male and female
Application Route: Inhalation
Exposure time: 105 weeks
Dose: 1100 - 2200 mg/m³
Frequency of Treatment: 6 hour
Method: OECD Test Guideline 453
Result: negative

1-Methyl-2-pyrrolidone:
Species: Rat, male and female
Application Route: Oral
Exposure time: 24 month(s)
Dose: 207 - 283 mg/kg
Frequency of Treatment: 7 daily
Method: EPA OTS 798.3300
Result: negative

Carcinogenicity -
Assessment : No data available

Reproductive toxicity

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Effects on fertility : Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 421

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 422

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Result: Animal testing did not show any effects on fertility.

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Species: Rat, male
Application Route: Oral
Method: OECD Test Guideline 415

Species: Rat, female
Application Route: Oral
Method: OECD Test Guideline 415
Result: No effects on fertility and early embryonic development were detected.

Ethylenediamine, propoxylated:

Species: Rat, male and female
Application Route: Oral
General Toxicity - Parent: No observed adverse effect level:
300 mg/kg body weight
General Toxicity F1: No observed adverse effect level: 1,000
mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 422
Result: negative

Terphenyl, hydrogenated:

Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Frequency of Treatment: 7 days/week
General Toxicity - Parent: No observed adverse effect level:
1,000 ppm
General Toxicity F1: No observed adverse effect level: 1,000
ppm
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on fertility.
GLP: yes

1-Methyl-2-pyrrolidone:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 416

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Effects on foetal development : Species: Rat, females
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
343 mg/kg body weight

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Developmental Toxicity: No observed adverse effect level:
343 mg/kg body weight
Method: OECD Test Guideline 414

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: No teratogenic effects

Species: Rat
Application Route: Inhalation
General Toxicity Maternal: No observed adverse effect level:
500 mg/kg body weight
Result: No teratogenic effects

Ethylenediamine, propoxylated:

General Toxicity Maternal: No-observed-effect level: 1,000
mg/kg body weight
Embryo-foetal toxicity: No-observed-effect level: 1,000 mg/kg
body weight
Result: No data available

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
400 mg/kg body weight
Result: No teratogenic effects

Bis(isopropyl)naphthalene:

Species: Rat, female
Application Route: Oral
Dose: 100, 250, 625 mg/kg
Duration of Single Treatment: 20 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: Lowest observed adverse effect
level: 250 mg/kg body weight
Teratogenicity: No observed adverse effect level: 625 mg/kg
body weight
Embryo-foetal toxicity: No observed adverse effect level: 625
mg/kg body weight
Method: Directive 67/548/EEC, Annex V, B.31.
Result: No teratogenic effects

Terphenyl, hydrogenated:

Species: Rat, female
Application Route: Oral
Dose: 125, 500, 1500 mg/kg bw/d
Frequency of Treatment: 1 daily
General Toxicity Maternal: No observed adverse effect level:
125 mg/kg body weight
Embryo-foetal toxicity: No observed adverse effect level: 500
mg/kg body weight

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Method: OECD Test Guideline 414
GLP: yes

1-Methyl-2-pyrrolidone:

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
125 mg/kg body weight
Method: OECD Test Guideline 414
Result: Teratogenic effects

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

Bis(isopropyl)naphthalene:

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Terphenyl, hydrogenated:

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

1-Methyl-2-pyrrolidone:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

Components:

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

1-Methyl-2-pyrrolidone:

Exposure routes: Inhalation

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

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1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Species: Rat, male and female

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NOAEL: 150 - 750
Application Route: Ingestion
Exposure time: 13 Weeks Number of exposures: 7 d
Method: Subchronic toxicity

Species: Rat, male and female
NOEL: 30 mg/kg
Application Route: Ingestion
Number of exposures: 7 d
Method: Subchronic toxicity

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:
Species: Rat, male and female
NOEC: >= 5000
Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 14 Weeks Number of exposures: 7 d
Method: OECD Test Guideline 413

Species: Rat, male and female
NOEC: >= 1160
Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 13 Weeks Number of exposures: 7 d
Method: OECD Test Guideline 413

Ethylenediamine, propoxylated:
Species: Rat, male and female
NOAEL: >= 1000
Application Route: Ingestion
Exposure time: 672 h Number of exposures: 1 h
Method: Subchronic toxicity
Remarks: see user defined free text

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:
Species: Rat, male and female
NOAEL: 1000
Application Route: Ingestion
Exposure time: 1,176 h Number of exposures: 7 d
Method: Subacute toxicity

Species: Rat, male and female
NOAEL: 300
Application Route: Ingestion
Exposure time: 1,176 h Number of exposures: 7 d
Method: Subacute toxicity

Bis(isopropyl)naphthalene:
Species: Rat, male and female
NOAEL: 170 mg/kg
Application Route: oral (feed)
Exposure time: 4,320 h Number of exposures: 7 d
Dose: 170, 340, and 670 mg/kg
Method: Subchronic toxicity

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Remarks: No significant adverse effects were reported

Terphenyl, hydrogenated:

Species: Rat, male and female

NOAEL: 12 mg/kg

LOAEL: 120 mg/kg

Application Route: oral (feed)

Exposure time: 14 weeks Number of exposures: 7 days/week

Method: OECD Test Guideline 408

Species: Rat, male and female

NOAEL: 0.1 mg/l

LOAEL: 0.5 mg/l

Application Route: Inhalation

Exposure time: 90 days Number of exposures: 6 hours/day, 5 days/week (67 n

Dose: 0, 10, 100, 500 mg/m³

Method: OECD Test Guideline 413

Species: Rabbit, male and female

NOAEL: 2,000 mg/kg

Application Route: Dermal

Exposure time: 21 days Number of exposures: 6 hours/day, 5 days/week

Dose: 125, 500, 2000 mg/kg bw/d

Method: Subacute toxicity

Target Organs: Skin

1-Methyl-2-pyrrolidone:

Species: Rat, male and female

NOEC: 169 mg/kg, 500

Application Route: Ingestion

Test atmosphere: dust/mist

Exposure time: 2,304 h Number of exposures: 7 d

Method: OECD Test Guideline 413

Species: Rabbit, male

NOAEL: 826 mg/kg

Application Route: Skin contact

Exposure time: 480 h Number of exposures: 5 d

Method: Subacute toxicity

Components:

Bis(isopropyl)naphthalene:

Repeated dose toxicity -

Assessment

: May be harmful if swallowed or if inhaled.

No adverse effect has been observed in chronic toxicity tests.

Terphenyl, hydrogenated:

Repeated dose toxicity -

Assessment

: No adverse effect has been observed in chronic toxicity tests.

Aspiration toxicity

Components:

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Distillates (petroleum), hydro- treated light; Kerosine — unspecified:
May be fatal if swallowed and enters airways.

Bis(isopropyl)naphthalene:
May be fatal if swallowed and enters airways.

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Toxicity to fish : EC50 (Lepomis macrochirus (Bluegill sunfish)): >= 6 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Method: OECD Test Guideline 203
Remarks: No-observed-effect level

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Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.46 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Remarks: Aquatic toxicity is unlikely due to low solubility.

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 7.49 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201
Remarks: Aquatic toxicity is unlikely due to low solubility.

Toxicity to fish (Chronic toxicity) : GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.7 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Test substance: Fresh water
Method: OECD Test Guideline 211
Remarks: Aquatic toxicity is unlikely due to low solubility.

EC50: >= 1.3 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Test substance: Fresh water

Ecotoxicology Assessment
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErL50 (Other): > 1,000 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

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Toxicity to microorganisms : EL50 (Bacteria): > 1,000 mg/l
Exposure time: 48 h
Test substance: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC: > 1,000 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Test substance: Fresh water

GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 1,000 mg/l
Exposure time: 21 d
Species: Daphnia (water flea)
Test substance: Fresh water

Ecotoxicology Assessment
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Ethylenediamine, propoxylated:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): ca. 4,600 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Method: DIN 38412
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.2.
GLP: yes

Toxicity to algae/aquatic plants : EC50 : 150.67 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Marine water
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): > 700 mg/l
Exposure time: 3 h
Test substance: Fresh water
Method: ISO 8192
GLP: no

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: >= 10 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

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1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 4,600 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Method: DIN 38412

LC50 (Leuciscus idus (Golden orfe)): 2,700 mg/l
Exposure time: 48 h
Test Type: static test
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : IC0 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae/aquatic plants : EC50 (Other): 150.67 mg/l
Exposure time: 72 h
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.3.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 10 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

Bis(isopropyl)naphthalene:

Toxicity to fish : LC50 : > 0.5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: Directive 67/548/EEC, Annex V, C.1.
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.16 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

EL50 (Daphnia magna (Water flea)): 1.7 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOECr (Desmodesmus subspicatus (green algae)): ca. 0.15 mg/l
Exposure time: 72 h
Test Type: static test
Method: DIN 38412

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Remarks: Aquatic toxicity is unlikely due to low solubility.

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.013 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 202

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment Acute aquatic toxicity : No toxicity at the limit of solubility

Terphenyl, hydrogenated:
Toxicity to fish : LC50 : > 100 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 56 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC (activated sludge): 103 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: < 1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

Ecotoxicology Assessment Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

Terphenyl:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 27 mg/l
Exposure time: 96 h
Test Type: static test
GLP: yes

NOEC (Oncorhynchus mykiss (rainbow trout)): 10 mg/l
Exposure time: 96 h
Test Type: static test

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GLP: yes

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 0.27 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 15-29 µg/l
Exposure time: 96 h
Test Type: Growth inhibition
GLP: no

Toxicity to fish (Chronic toxicity) : 0.049 mg/l
Exposure time: 34 d
Species: Pimephales promelas (fathead minnow)
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : 0.0048 - 0.0070 mg/L
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
GLP: yes

M-Factor (Chronic aquatic toxicity) : 10

Ecotoxicology Assessment
Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

1-Methyl-2-pyrrolidone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 500 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 : > 1,000 mg/l
Exposure time: 24 h
Test Type: semi-static test
Test substance: Fresh water
Method: DIN 38412

Toxicity to algae/aquatic plants : EgC50 (Desmodesmus subspicatus (green algae)): 600.5 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : NOEC: 12.5 mg/l
Exposure time: 21 d

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(Chronic toxicity) Species: Daphnia magna (Water flea)
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

12.2 Persistence and degradability.

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:

Biodegradability : Inoculum: activated sludge
Concentration: 10 mg/l
Result: Readily biodegradable.
Biodegradation: 70.73 %
Exposure time: 28 d
Method: OECD Test Guideline 310

Stability in water : Degradation half life (DT50): 1.48 - 14.75 yr (20 °C)
pH: 7.5
Method: No information available.

Distillates (petroleum), hydro- treated light; Kerosine — unspecified:

Biodegradability : Inoculum: activated sludge
Concentration: 38 mg/l
Result: Readily biodegradable.
Biodegradation: ca. 67.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Inoculum: Marine water
Result: Readily biodegradable.
Biodegradation: 68.8 %
Exposure time: 28 d
Method: OECD Test Guideline 306

Inoculum: Soil
Concentration: 2000
Biodegradation: > 60 %
Exposure time: 61 d

Ethylenediamine. propoxylated:

Biodegradability : Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 9 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.D.

Biochemical Oxygen Demand (BOD) : 355 mg/g

Chemical Oxygen Demand (COD) : 1,600 mg/g

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1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:

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Biodegradability : Inoculum: activated sludge
Concentration: 107 mg/l
Result: Inherently biodegradable.
Biodegradation: 36 %
Exposure time: 28 d
Method: OECD Test Guideline 302B

Inoculum: Domestic sewage
Concentration: 30 mg/l
Result: Not readily biodegradable.
Biodegradation: 9 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.D.

Bis(isopropyl)naphthalene:
Biodegradability : Inoculum: activated sludge
Concentration: 0.2 mg/l
Result: Not readily biodegradable.
Biodegradation: 30 - 35 %
Exposure time: 56 d
Method: OECD Test Guideline 310

1-Methyl-2-pyrrolidone:
Biodegradability : Concentration: 30 mg/l
Result: Readily biodegradable.
Biodegradation: 73 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Chemical Oxygen Demand (COD) : 1,600 mg/l

12.3 Bioaccumulative potential,

Components:

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate:
Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 23 d
Bioconcentration factor (BCF): 1.95
Test substance: Fresh water
Method: flow-through test
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 4.04 - 4.91 (25 °C)
pH: 7

Ethylenediamine, propoxylated:
Partition coefficient: n-octanol/water : log Pow: -1.56 - 1.82 (25 °C)
pH: 12
GLP: no

1,1',1'',1'''-Ethylenedinitrilotetrapropan-2-ol:
Partition coefficient: n-octanol/water : log Pow: -2.08 (25 °C)

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octanol/water

Bis(isopropyl)naphthalene:
Bioaccumulation

: Species: Cyprinus carpio (Carp)
Exposure time: 60 d
Bioconcentration factor (BCF): 770 - 6,400
Test substance: Fresh water
Method: flow-through test

Partition coefficient: n-
octanol/water

: log Pow: 6.081
Method: QSAR

Terphenyl, hydrogenated:
Partition coefficient: n-
octanol/water

: log Pow: 6.5

1-Methyl-2-pyrrolidone:
Partition coefficient: n-
octanol/water

: log Pow: -0.46 (25 °C)
Method: OECD Test Guideline 107

12.4 Mobility in soil,

Components:

Ethylenediamine, propoxylated:
Distribution among
environmental compartments

: Koc: ca. 1.58
Method: OECD Test Guideline 121

Bis(isopropyl)naphthalene:
Distribution among
environmental compartments

: Koc: 36108
Method: QSAR

1-Methyl-2-pyrrolidone:
Distribution among
environmental compartments

: Koc: 20.94
Method: QSAR

12.5 Results of PBT and vPvB assessment,

Product:

Assessment

: This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB)..

12.6 Other adverse effects,

Product:

Additional ecological
information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of contents/ container to an approved waste disposal plant.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

IATA

14.1 UN number	: UN 3082
14.2 UN proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (DIISOPROPYLNAPHTHALENE ISOMERS, Terphenyl)
14.3 Transport hazard class(es)	: 9
14.4 Packing group	: III
Labels	: Class 9 - Miscellaneous dangerous substances and articles
Packing instruction (cargo aircraft)	: 964
Packing instruction (passenger aircraft)	: 964

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

IMDG

14.1 UN number	: UN 3082
14.2 UN proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIISOPROPYLNAPHTHALENE ISOMERS, Terphenyl)
14.3 Transport hazard class(es)	: 9
14.4 Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F

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14.5 Environmental hazards

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Marine pollutant : yes

ADR

14.1 UN number : UN 3082
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIISOPROPYLNAPHTHALENE ISOMERS, Terphenyl)
14.3 Transport hazard class(es) : 9
14.4 Packing group : III
Labels : 9
14.5 Environmental hazards
Environmentally hazardous : yes

RID

14.1 UN number : UN 3082
14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIISOPROPYLNAPHTHALENE ISOMERS, Terphenyl)
14.3 Transport hazard class(es) : 9
14.4 Packing group : III
Labels : 9
14.5 Environmental hazards
Environmentally hazardous : yes

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

REACH - List of substances subject to authorisation - Future sunset date : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Terphenyl, hydrogenated N-methyl-2-pyrrolidone

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E2 ENVIRONMENTAL HAZARDS

34 Petroleum products: (a)

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gasolines and naphthas,
(b) kerosenes (including jet
fuels), (c) gas oils

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(including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

- TCSI : Not in compliance with the inventory
- TSCA : Not On TSCA Inventory
- AICS : Not in compliance with the inventory
- DSL : This product contains one or several components that are not on the Canadian DSL nor NDSL.
- ENCS : Not in compliance with the inventory
- KECI : Not in compliance with the inventory
- PICCS : Not in compliance with the inventory
- IECSC : Not in compliance with the inventory
- NZIoC : Not in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOIC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

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15.2 Chemical safety assessment

SECTION 16: Other information

Full text of H-Statements

H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H360D	: May damage the unborn child.
H361d	: Suspected of damaging the unborn child.
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.
H412	: Harmful to aquatic life with long lasting effects.
H413	: May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Eye Irrit.	: Eye irritation
Repr.	: Reproductive toxicity
Skin Irrit.	: Skin irritation
STOT SE	: Specific target organ toxicity - single exposure
2009/161/EU	: Europe. COMMISSION DIRECTIVE 2009/161/EU establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
2017/164/EU	: Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
2009/161/EU / TWA	: Limit Value - eight hours
2009/161/EU / STEL	: Short term exposure limit
2017/164/EU / STEL	: Short term exposure limit
2017/164/EU / TWA	: Limit Value - eight hours
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	: Short-term exposure limit (15-minute reference period)

Further information

Classification of the mixture:

Skin Irrit. 2	H315
Eye Irrit. 2	H319
Repr. 2	H361d
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.