

1 Identification

- **Product identifier**
- **Trade name:** OptiScint Flow
- **Article number:** 6013791, 6013793, 6013796
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Revvity Health Sciences B.V.
 Rigaweg 22
 9723 TH Groningen
 The Netherlands
 Phone: 0031 50 5445900
 www.revvity.com
- **Information department:**
 Quality Assurance, Environment, Safety & Health (QA/ESH)
 SDS.Groningen@revvity.com
- **Emergency telephone number:**
 +31 50 5445971
 CHEMTREC (within U.S.A. and Canada) 1-800-424-9300
 CHEMTREC (from outside U.S.A. and Canada) +1703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Aspiration Hazard 1 H304 May be fatal if swallowed and enters airways.



GHS05 Corrosion

Eye Damage 1 H318 Causes serious eye damage.



GHS09 Environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Skin Irritation 2 H315 Causes skin irritation.

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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Hazard pictograms



GHS05 GHS07 GHS08 GHS09

Signal word *Danger*

Hazard-determining components of labeling:

alcohols, C11-15-secondary, ethoxylated
Diisopropyl naphthalene isomers
bis(2-ethylhexyl) hydrogen phosphate
Phosphoric acid, 2-ethylhexyl ester

Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P331 Do NOT induce vomiting.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards

Results of PBT and vPvB assessment

PBT:

38640-62-9	Diisopropyl naphthalene isomers
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vPvB:

38640-62-9	Diisopropyl naphthalene isomers
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3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

38640-62-9	Diisopropyl naphthalene isomers Aspiration Hazard 1, H304 Aquatic Chronic 1, H410 PBT; vPvB	40-60%
68131-40-8	alcohols, C11-15-secondary, ethoxylated Eye Damage 1, H318 Aquatic Chronic 3, H412	10-20%
68131-40-8	alcohols, C11-15-secondary, ethoxylated Aquatic Chronic 2, H411 Sensitization - Skin 1, H317	10-20%

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68131-40-8	alcohols, C11-15-secondary, ethoxylated Aquatic Chronic 3, H412	10-20%
78-40-0	Triethyl phosphate ⚠ Acute Toxicity - Oral 4, H302; Eye Irritation 2A, H319	2.5-10%
298-07-7	bis(2-ethylhexyl) hydrogen phosphate ⚠ Skin Corrosion 1B, H314 ⚠ Acute Toxicity - Oral 4, H302	2.5-10%
12645-31-7	Phosphoric acid, 2-ethylhexyl ester ⚠ Skin Corrosion 1B, H314	2.5-10%

· **Non-Dangerous components**

92-71-7	2,5-Diphenyloxazole (PPO)	0-2.5%
7732-18-5	water, distilled, conductivity or of similar purity	0-2.5%
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	0-2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

* **6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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· **Protective Action Criteria for Chemicals**

· **PAC-1:**

38640-62-9	Diisopropyl naphthalene isomers	5.6 mg/m ³
78-40-0	Triethyl phosphate	23 mg/m ³
298-07-7	bis(2-ethylhexyl) hydrogen phosphate	15 mg/m ³
92-71-7	2,5-Diphenyloxazole (PPO)	2.5 mg/m ³
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	12 mg/m ³

· **PAC-2:**

38640-62-9	Diisopropyl naphthalene isomers	61 mg/m ³
78-40-0	Triethyl phosphate	250 mg/m ³
298-07-7	bis(2-ethylhexyl) hydrogen phosphate	160 mg/m ³
92-71-7	2,5-Diphenyloxazole (PPO)	27 mg/m ³
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	130 mg/m ³

· **PAC-3:**

38640-62-9	Diisopropyl naphthalene isomers	370 mg/m ³
78-40-0	Triethyl phosphate	320 mg/m ³
298-07-7	bis(2-ethylhexyl) hydrogen phosphate	980 mg/m ³
92-71-7	2,5-Diphenyloxazole (PPO)	160 mg/m ³
13280-61-0	1,4-Bis-(2-methylstyryl)-benzene (bis-MSB)	790 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

78-40-0 Triethyl phosphate
WEEL Long-term value: 7.45 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.

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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

EN ISO 374-1/Type B

- **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.2 mm

Breakthrough time: > 120 minutes

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Color:	Colorless
· Odor:	Characteristic
· Odor threshold:	Not determined.

· pH-value at 20 °C (68 °F):	<5
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- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	215 °C (419 °F)

· Flash point:	115 °C (239 °F)
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· Flammability (solid, gaseous):	Not applicable.
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· Decomposition temperature:	Not determined.
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· Ignition temperature:	Product is not selfigniting.
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· Danger of explosion:	Product does not present an explosion hazard.
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- **Explosion limits:**

Lower:	0.4 Vol %
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Upper:	4.7 Vol %
· Vapor pressure at 20 °C (68 °F):	>0 hPa
· Density at 20 °C (68 °F):	0.96-0.98 g/cm ³ (8.0112-8.1781 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	28 cSt at 20°C
· Solvent content:	
VOC content:	0-2.5 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral LD50 18,417 mg/kg

- **Primary irritant effect:**
- **on the eye:** Causes serious eye damage.
- **Sensitization:** May cause an allergic skin reaction.
- **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**

· **PBT:**

38640-62-9 Diisopropyl naphthalene isomers

· **vPvB:**

38640-62-9 Diisopropyl naphthalene isomers

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **ADR, IMDG, IATA** UN3082

· **UN proper shipping name**

· **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diisopropyl naphthalene isomers, alcohols, C11-15-secondary, ethoxylated)

· **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diisopropyl naphthalene isomers, alcohols, C11-15-secondary, ethoxylated), MARINE POLLUTANT

· **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diisopropyl naphthalene isomers, alcohols, C11-15-secondary, ethoxylated)

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· **Transport hazard class(es)**

· **ADR**



· **Class**

9 (M6) Miscellaneous dangerous substances and articles

· **Label**

9

· **IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**

· **ADR, IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances:
Diisopropyl naphthalene isomers

· **Marine pollutant:**

Yes (DOT)
Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· **Hazard identification number (Kemler code):**

90

· **EMS Number:**

F-A,S-F

· **Stowage Category**

A

· **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **Remarks:**

Special marking with the symbol (fish and tree).

· **ADR**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

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· **UN "Model Regulation":** UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIISOPROPYL NAPHTHALENE ISOMERS, ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED), 9, III

15 Regulatory information

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

No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

38640-62-9	Diisopropyl naphthalene isomers	ACTIVE
78-40-0	Triethyl phosphate	ACTIVE
298-07-7	bis(2-ethylhexyl) hydrogen phosphate	ACTIVE
12645-31-7	Phosphoric acid, 2-ethylhexyl ester	ACTIVE
92-71-7	2,5-Diphenyloxazole (PPO)	ACTIVE
7732-18-5	water, distilled, conductivity or of similar purity	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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Printing date 11/24/2023

Reviewed on 11/24/2023

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· Hazard pictograms



GHS05 GHS07 GHS08 GHS09

· Signal word *Danger*

· Hazard-determining components of labeling:

alcohols, C11-15-secondary, ethoxylated
Diisopropyl naphthalene isomers
bis(2-ethylhexyl) hydrogen phosphate
Phosphoric acid, 2-ethylhexyl ester

· Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P301+P310 If swallowed: Immediately call a poison center/doctor.
P331 Do NOT induce vomiting.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
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.

· Department issuing SDS: Quality Assurance, Environment, Safety & Health (QA/ESH)

· Contact: SDS.Groningen@revvity.com

· Date of preparation / last revision 11/24/2023

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Corrosion 1B: Skin corrosion/irritation – Category 1B

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Sensitization - Skin 1: Skin sensitisation – Category 1

Aspiration Hazard 1: Aspiration hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**

US