

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Date of issue: 31/12/2020 Revision date: 15/12/2021 Supersedes: 31/12/2020 Version: 1.1

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

1.1. Product identifier

Product form : Mixture

Product name : 2990 HYPALON Adhesive

Product code : 2990

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Adhesive

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Polymarine Ltd. Chester House The Dingle Colwyn Bay, Conwy LL29 7SN

LL29 7SN United Kingdom

Flam. Liq. 2

Telephone: +44 (0)1492 583322 Fax: +44 (0)1492 531666 E-mail: info@polymarine.com

1.4. Emergency telephone number

Emergency number : +44 (0)1827 69662 (Office hours only, English language only)

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

H225

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Skin Sens. 1 H317

STOT SE 3 H336

Aquatic Chronic 2 H411

Full text of hazard classes, H- and EUH-statements: see section 16

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Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP) : Danger

Contains : Butanone, Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane,

Cyclohexane, Acetone, Rosin

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P260 - Do not breathe dust, fume, gas, mist, spray, vapours. P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 - Wear eye protection, protective clothing, protective gloves, face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P313 - Get medical advice/attention.

P501 - Dispose of contents and container to in accordance with national regulations.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier		Classification according to Regulation (EC) No. 1272/2008 [CLP]
Butanone	CAS-No.: 78-93-3 EC No.: 201-159-0 EC index No.: 606-002-00-3 REACH-no: 01-2119457290- 43-XXXX	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	EC No.: 921-024-6 REACH-no: 01-2119475514- 35-XXXX	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Cyclohexane	CAS-No.: 110-82-7 EC No.: 203-806-2 EC index No.: 601-017-00-1 REACH-no: 01-2119463273- 41-XXXX	10 - 20	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Acetone	CAS-No.: 67-64-1 EC No.: 200-662-2 EC index No.: 606-001-00-8 REACH-no: 01-2119471330- 49-XXXX	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Rosin	CAS-No.: 8050-09-7 EC No.: 232-475-7 EC index No.: 650-015-00-7 REACH-no: 01-2119480418- 32-XXXX	1 - 5	Skin Sens. 1, H317
n-hexane	CAS-No.: 110-54-3 EC No.: 203-777-6 EC index No.: 601-037-00-0 REACH-no: 01-2119480412- 44-XXXX	<1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Magnesium oxide	CAS-No.: 1309-48-4 EC No.: 215-171-9	< 1	Not classified
Zinc oxide	CAS-No.: 1314-13-2 EC No.: 215-222-5 EC index No.: 030-013-00-7 REACH-no: 01-2119463881- 32-XXXX	< 1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
	CAS-No.: 110-54-3 EC No.: 203-777-6 EC index No.: 601-037-00-0 REACH-no: 01-2119480412- 44-XXXX	(5 ≤C ≤ 100) STOT RE 2, H373

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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First-aid measures after inhalation : Remove to fresh air, keep the patient warm and at rest. If symptoms develop, obtain

medical attention.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water,

followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Ensure that folded skin of eyelids is

thoroughly washed with water. Remove contact lenses, if present and easy to do. Continue

rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse

mouth. Give 100 - 200 ml of water to drink. Obtain immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause drowsiness or dizziness. Nausea.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Ingestion may cause discomfort. May cause stomach pain or vomiting if ingested.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide. Dry chemical. For large fire: Water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Vapours are heavier than air and may travel

considerable distance to an ignition source and flash back to source of vapours.

Explosion hazard : May form flammable/explosive vapour-air mixture.

Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Nitrogen oxides.

5.3. Advice for firefighters

Firefighting instructions : Move containers from fire area if you can do it without risk. Cool closed containers exposed

to fire with water spray. Exercise caution when fighting any chemical fire. Do not allow run-

off from fire fighting to enter drains or water courses.

Protection during firefighting : As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Remove ignition sources. Ventilate area. Avoid inhalation of vapours. Avoid contact with

eyes, skin and clothing. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required. See Section 8.

Emergency procedures : Remove ignition sources. Use only non-sparking tools. Ventilate area. Avoid inhalation of

vapours. Avoid contact with eyes, skin and clothing.

6.2. Environmental precautions

Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak, if possible without risk. Dam up the liquid spill.

Methods for cleaning up : Use non-sparking tools. Absorb with earth, sand or other non-combustible material and

transfer to containers for later disposal.

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6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed Precautions for safe handling

- : Handle empty containers with care because residual vapours are flammable.
 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Use only non-sparking tools. Take precautionary measures against static discharge. Use explosion-proof equipment. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Provide good ventilation in process area to prevent formation of

vapour. Use only outdoors or in a well-ventilated area.

Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep only in original container. Store tightly closed in a dry, cool and well-

ventilated place.

Incompatible materials

: Strong oxidising agents.

Storage temperature

: 5 - 25 °C

7.3. Specific end use(s)

Adhesive.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Butanone (78-93-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Butanone
IOELV TWA (mg/m³)	600 mg/m³
IOELV TWA (ppm)	200 ppm
IOELV STEL (mg/m³)	900 mg/m³
IOELV STEL (ppm)	300 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Ireland - Occupational Exposure Limits	
Local name	Methyl ethyl ketone (MEK)
OEL (8 hours ref) (mg/m³)	600 mg/m³
OEL TWA [2]	200 ppm
OEL (15 min ref) (mg/m3)	900 mg/m³
OEL STEL [ppm]	300 ppm
Regulatory reference	Chemical Agents Code of Practice 2021

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Butanone (78-93-3)		
Ireland - Biological limit values		
Local name	Butan-2-one	
BLV	70 μmol/l Parameter: butan-2- one - Medium: urine - Sampling time: Post shift	
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)	
United Kingdom - Occupational Exposure Limits		
Local name	Butan-2-one (methyl ethyl ketone)	
WEL TWA (mg/m³)	600 mg/m³	
WEL TWA (ppm)	200 ppm	
WEL STEL (mg/m³)	899 mg/m³	
WEL STEL (ppm)	300 ppm	
Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	
United Kingdom - Biological limit values		
Local name	Butan-2-one (methyl ethyl ketone)	
BMGV	70 μmol/l Parameter: butan-2-one - Medium: urine - Sampling time: Post shift	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	
Cyclohexane (110-82-7)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Cyclohexane	
IOELV TWA (mg/m³)	700 mg/m³	
IOELV TWA (ppm)	200 ppm	
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC	
Ireland - Occupational Exposure Limits		
Local name	Cyclohexane	
OEL (8 hours ref) (mg/m³)	700 mg/m³	
OEL TWA [2]	200 ppm	
Regulatory reference	Chemical Agents Code of Practice 2021	
United Kingdom - Occupational Exposure Limits		
Local name	Cyclohexane	
WEL TWA (mg/m³)	350 mg/m³	
WEL TWA (ppm)	100 ppm	
WEL STEL (mg/m³)	1050 mg/m³	
WEL STEL (ppm)	300 ppm	
Regulatory reference EH40/2005 (Fourth edition, 2020). HSE		
Acetone (67-64-1)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	Acetone	
IOELV TWA (mg/m³)	1210 mg/m³	

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EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Acetone (67-64-1)		
Incident	IOELV TWA (ppm)	500 ppm	
	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC	
OEL (8 hours ref) (mg/m²) 1210 mg/m² OEL TWA [2] 500 ppm Regulatory reference Chemical Agents Code of Practice 2021 Ireland - Biological Ilmit values Local name Acetone BLV 50 mg/l Parameter: acetone - Medium: urine - Sampling time: End of shift - Notations: Ns (Non-specific) Regulatory reference Biological Monitoring Guidelines (HSA, 2011) United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m²) 1210 mg/m² WEL TWA (ppm) 500 ppm WEL STEL (mg/m²) 3620 mg/m² WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m²) 2 mg/m² R (Respirable Fraction) OEL (8 in in ref) (mg/m²) 10 mg/m² Regulatory reference Chemical Agents Code of Practice 2021 n-hexame (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) LOcal name n-Hexane IOELV TWA (mg/			
OEL TWA [2] 500 ppm Regulatory reference Chemical Agents Code of Practice 2021 Ireland - Biological limit values Local name Acetone BLY 50 mg/l Parameter: acetone - Medium: urine - Sampling time: End of shift - Notations: Na (Non-specific) Regulatory reference Biological Monitoring Guidelines (HSA, 2011) United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m²) 1210 mg/m² WEL TWA (ppm) 500 ppm WEL STEL (mg/m²) 3620 mg/m² WEL STEL (mg/m²) 3620 mg/m² WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name DEL (16 min ref) (mg/m²) 2 mg/m² R (Respirable Fraction) DEL (15 min ref) (mg/m²) 10 mg/m² Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane	Local name	Acetone	
Regulatory reference Chemical Agents Code of Practice 2021 Ireland - Biological limit values Local name Acetone BLV Stormy Parameter: acetone - Medium: urine - Sampling time: End of shift - Notations: Ns (Non-specific) Regulatory reference Biological Monitoring Guidelines (HSA, 2011) United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m³) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane OELV TWA (mg/m³) 72 mg/m³ OELV TWA (mg/m³) 72 mg/m³ OELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane OELV TWA (mg/m³) 72 mg/m³ OELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC	OEL (8 hours ref) (mg/m³)	1210 mg/m³	
Ireland - Biological limit values Local name Acetone BLV 50 mg/l Parameter: acetone - Medium: urine - Sampling time: End of shift - Notations: Ns (Non-specific) Regulatory reference Biological Monitoring Guidelines (HSA, 2011) United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m²) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m²) 3820 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m²) 2 mg/m² R (Respirable Fraction) OEL (15 min ref) (mg/m²) 10 mg/m² Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane OELV TWA (mg/m²) 72 mg/m² Regulatory reference n-Hexane OELV TWA (mg/m²) 10 ppm Regulatory reference n-Hexane OELV TWA (ppm) 20 ppm	OEL TWA [2]	500 ppm	
Acetone Acetone	Regulatory reference	Chemical Agents Code of Practice 2021	
BLV 50 mg/l Parameter: acetone - Medium: urine - Sampling time: End of shift - Notations: Ns (Non-specific) Regulatory reference Biological Monitoring Guidelines (HSA, 2011) United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m³) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane OCELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC	Ireland - Biological limit values		
Regulatory reference Biological Monitoring Guidelines (HSA, 2011) United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m³) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (mg/m³) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane In-Hexane	Local name	Acetone	
United Kingdom - Occupational Exposure Limits Local name Acetone WEL TWA (mg/m³) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	BLV		
Local name Acetone WEL TWA (mg/m³) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name Local name n-Hexane	Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)	
WEL TWA (mg/m³) 1210 mg/m³ WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits In-Hexane	United Kingdom - Occupational Exposure Limits		
WEL TWA (ppm) 500 ppm WEL STEL (mg/m³) 3620 mg/m³ WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m³) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Local name	Acetone	
WEL STEL (mg/m³) WEL STEL (ppm) Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name OEL (8 hours ref) (mg/m³) OEL (15 min ref) (mg/m³) OEL (15 min ref) (mg/m³) Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) IOELV TWA (ppm) Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	WEL TWA (mg/m³)	1210 mg/m³	
WEL STEL (ppm) 1500 ppm Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m²) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m3) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	WEL TWA (ppm)	500 ppm	
Regulatory reference EH40/2005 (Fourth edition, 2020). HSE Zinc oxide (1314-13-2) Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m3) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	WEL STEL (mg/m³)	3620 mg/m³	
Ireland - Occupational Exposure Limits Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m3) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits In-Hexane	WEL STEL (ppm)	1500 ppm	
Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m3) 10 mg/m³ Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	
Local name Zinc oxide, fume OEL (8 hours ref) (mg/m³) 2 mg/m³ R (Respirable Fraction) OEL (15 min ref) (mg/m3) Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) T2 mg/m³ IOELV TWA (ppm) Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Zinc oxide (1314-13-2)		
OEL (8 hours ref) (mg/m³) OEL (15 min ref) (mg/m³) Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane (OELV TWA (mg/m³) T2 mg/m³ IOELV TWA (ppm) Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Ireland - Occupational Exposure Limits		
OEL (15 min ref) (mg/m3) Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Local name	Zinc oxide, fume	
Regulatory reference Chemical Agents Code of Practice 2021 n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) IOELV TWA (ppm) Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	OEL (8 hours ref) (mg/m³)	2 mg/m³ R (Respirable Fraction)	
n-hexane (110-54-3) EU - Indicative Occupational Exposure Limit (IOEL) Local name	OEL (15 min ref) (mg/m3)	10 mg/m ³	
EU - Indicative Occupational Exposure Limit (IOEL) Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Regulatory reference	Chemical Agents Code of Practice 2021	
Local name n-Hexane IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) 20 ppm Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	n-hexane (110-54-3)		
IOELV TWA (mg/m³) 72 mg/m³ IOELV TWA (ppm) Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	EU - Indicative Occupational Exposure Limit (IOEL)		
IOELV TWA (ppm) Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	Local name	n-Hexane	
Regulatory reference COMMISSION DIRECTIVE 2006/15/EC Ireland - Occupational Exposure Limits Local name n-Hexane	IOELV TWA (mg/m³)	72 mg/m³	
Ireland - Occupational Exposure Limits Local name n-Hexane	IOELV TWA (ppm)	20 ppm	
Local name n-Hexane	Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC	
	Ireland - Occupational Exposure Limits		
OFI (0 hours and (may/m2)	Local name	n-Hexane	
UEL (δ nours rer) (mg/m³) /2 mg/m³	OEL (8 hours ref) (mg/m³)	72 mg/m³	
OEL TWA [2] 20 ppm	OEL TWA [2]	20 ppm	
Regulatory reference Chemical Agents Code of Practice 2021	Regulatory reference	Chemical Agents Code of Practice 2021	
Ireland - Biological limit values			
Local name Hexane	Local name	Hexane	

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n hovens (110 54 2)		
n-hexane (110-54-3)		
BLV	0.4 mg/l Parameter: 2,5-Hexanedion - Medium: urine - Sampling time: End of shift at end of workweek	
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)	
United Kingdom - Occupational Exposure Limits		
Local name	n-Hexane	
WEL TWA (mg/m³)	72 mg/m³	
WEL TWA (ppm)	20 ppm	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	
Magnesium oxide (1309-48-4)		
Ireland - Occupational Exposure Limits		
Local name	Magnesium oxide	
OEL (8 hours ref) (mg/m³)	4 mg/m³ respirable dust 5 mg/m³ fume 10 mg/m³ total inhalable dust	
OEL (15 min ref) (mg/m3)	10 mg/m³ fume	
Regulatory reference	Chemical Agents Code of Practice 2021	
United Kingdom - Occupational Exposure Limits		
Local name	Magnesium oxide	
WEL TWA (mg/m³)	10 mg/m³ (as Mg) inhalable dust fume 4 mg/m³ (as Mg) fume and respirable dust	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	
Rosin (8050-09-7)		
United Kingdom - Occupational Exposure Limits		
Local name	Rosin-based solder flux fume	
WEL TWA (mg/m³)	0.05 mg/m³	
WEL STEL (mg/m³)	0.15 mg/m³	
Remark (WEL)	Sen (Capable of causing occupational asthma. See paragraphs 53–56)	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Butanone (78-93-3)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	1161 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	600 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	31 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	106 mg/m³	

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Butanone (78-93-3)		
Long-term - systemic effects, dermal	412 mg/kg bodyweight/day	
PNEC (Water)		
PNEC aqua (freshwater)	55.8 mg/l	
PNEC aqua (marine water)	55.8 mg/l	
PNEC aqua (intermittent, freshwater)	55.8 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	284.74 mg/kg dwt	
PNEC sediment (marine water)	284.74 mg/kg dwt	
PNEC (Soil)		
PNEC soil	22.5 mg/kg dwt	
PNEC (Oral)		
PNEC oral (secondary poisoning)	1000 mg/kg food	
PNEC (STP)		
PNEC sewage treatment plant	709 mg/l	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	773 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	2035 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	699 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	608 mg/m³	
Long-term - systemic effects, dermal	699 mg/kg bodyweight/day	
Cyclohexane (110-82-7)		
DNEL/DMEL (Workers)		
Acute - systemic effects, inhalation	1400 mg/m³	
Acute - local effects, inhalation	1400 mg/m³	
Long-term - systemic effects, dermal	2016 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	700 mg/m³	
Long-term - local effects, inhalation	700 mg/m³	
DNEL/DMEL (General population)		
Acute - systemic effects, inhalation	412 mg/m³	
Acute - local effects, inhalation	412 mg/m³	
Long-term - systemic effects,oral	59.4 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	206 mg/m³	
Long-term - systemic effects, dermal	1186 mg/kg bodyweight/day	
Long-term - local effects, inhalation	206 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	0.207 mg/l	

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Cyclohexane (110-82-7)		
PNEC aqua (marine water)	0.207 mg/l	
PNEC aqua (intermittent, freshwater)	0.207 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	16.68 mg/kg dwt	
PNEC sediment (marine water)	16.68 mg/kg dwt	
PNEC (Soil)		
PNEC soil	3.38 mg/kg dwt	
PNEC (STP)		
PNEC sewage treatment plant	3.24 mg/l	

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide good ventilation in process area to prevent formation of vapour. If user operations generate vapour or dust, use process enclosures, local exhaust ventilation or other engineering controls to minimise worker exposure. Ensure exposure is below occupational exposure limits (where available). Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

Eye protection:

Safety goggles. Standard EN 166 - Personal eye-protection.

8.2.2.2. Skin protection

Skin and body protection:

Long-sleeved protective clothing

Hand protection:

Wear protective gloves if skin contact is possible. Standard EN 374 - Protective gloves against chemicals. Recommended: Nitrile rubber gloves. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Type ABEK-P3 filter is recommended. Standard EN 14387 - Gas filter(s), combined filter(s) and full face mask - EN 136.

8.2.2.4. Thermal hazards

Thermal hazard protection:

Not required for normal conditions of use.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Assure that emissions are compliant with all applicable air pollution control regulations. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Other information:

Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures.

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Boiling point

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Various colours.

Appearance : Liquid.

Odour : Acetone.

Odour threshold : Not available

Melting point : Not available

Freezing point : Not available

Flammability : Highly flammable liquid and vapour.

Explosive properties : May form flammable/explosive vapour-air mixture.

: 56 °C

Oxidising properties : Not oxidising.

Explosive limits : 0.6 - 13 vol %

Lower explosion limit : Not available

Upper explosion limit : Not available

Flash point : -22 °C (closed cup)

Auto-ignition temperature: 200 °CDecomposition temperature: Not availablepH: Not availablepH solution: 7 - 8

Viscosity, kinematic : > 20.5 mm²/s

Solubility : In water, material is partially soluble.

Log Kow : Not available
Vapour pressure : Not available
Vapour pressure at 50 °C : Not available
Density : Not available

Vapour pressure at 50 °C : Not available

Relative density : 0.86 (20°C), (Water = 1)

Relative vapour density at 20 °C : Not available Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosion limits : 0.6 - 13 vol %

9.2.2. Other safety characteristics

VOC content : ≤ 700 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7). Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

May form flammable/explosive vapour-air mixture.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Strong oxidising agents.

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Additional information

Reproductive toxicity

Additional information STOT-single exposure

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified Acute toxicity (dermal) : Not classified Acute toxicity (inhalation) : Not classified

Additional information :	Based on available data, the classification criteria are not met
Butanone (78-93-3)	
LD50 oral, rat	2193 mg/kg bw/day (Read-across, CAS 78-92-2)
LD50 dermal, rabbit	> 10 ml/kg
Hydrocarbons, C6-C7, n-alkanes, isoalkanes	, cyclics, <5% n-hexane
LD50 oral, rat	> 5840 mg/kg bodyweight (Read-across)
LD50 dermal, rat	> 2920 mg/kg bodyweight (Read-across)
LC50 inhalation, rat (mg/l)	> 25.2 mg/l - 4 Hours
Cyclohexane (110-82-7)	
LD50 oral, rat	> 5000 mg/kg bodyweight (OECD 401 method)
LD50 dermal, rabbit	> 2000 mg/kg bodyweight (OECD 402 method)
LC50 inhalation, rat (mg/l)	> 32.88 mg/l (OECD 403 method)
Acetone (67-64-1)	
LD50 oral, rat	5800 mg/kg bodyweight
Zinc oxide (1314-13-2)	
LD50 oral, rat	> 2000 mg/kg bodyweight
LD50 dermal, rat	> 2000 mg/kg bodyweight
LC50 inhalation, rat (mg/l)	> 5.7 mg/l - 4 Hours
n-hexane (110-54-3)	
LD50 oral, rat	16000 mg/kg bodyweight
LC50 inhalation, rat (ppm)	> 5000 ppm - 24 Hours
Rosin (8050-09-7)	
LD50 oral, rat	> 2000 mg/kg bodyweight
LD50 dermal, rabbit	> 2000 mg/kg bodyweight
	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Not classified
Additional information :	Based on available data, the classification criteria are not met Not classified

: May cause drowsiness or dizziness.

: Not classified

: Based on available data, the classification criteria are not met

: Based on available data, the classification criteria are not met

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Butanone (78-93-3)		
STOT-single exposure	May cause drowsiness or dizziness.	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes,	cyclics, <5% n-hexane	
STOT-single exposure	May cause drowsiness or dizziness.	
Cyclohexane (110-82-7)		
STOT-single exposure	May cause drowsiness or dizziness.	
Acetone (67-64-1)		
STOT-single exposure	May cause drowsiness or dizziness.	
n-hexane (110-54-3)		
STOT-single exposure	May cause drowsiness or dizziness.	
	Not classified Based on available data, the classification criteria are not met	
n-hexane (110-54-3)		
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.	
Aspiration hazard :	Not classified	
Additional information :	Based on available data, the classification criteria are not met	
2990 HYPALON Adhesive		
Viscosity, kinematic	> 20.5 mm²/s	

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms

: Causes serious eye irritation,Causes skin irritation,May cause an allergic skin reaction,May cause drowsiness or dizziness,Nausea,Ingestion may cause discomfort,May cause stomach pain or vomiting if ingested

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term : Not classified

(acute)

Hazardous to the aquatic environment, long-term : Toxic to aquatic life with long lasting effects.

(chronic)

·		
Butanone (78-93-3)		
LC50 fish	2993 mg/l - 96 Hours (Pimephales promelas)	
EC50 Daphnia	308 mg/l - 48 Hours (Daphnia magna)	
ErC50 algae	1972 mg/l - 96 Hours (Pseudokirchneriella subcapitata)	
NOEC chronic algae	1240 mg/l - 96 Hours (Pseudokirchneriella subcapitata)	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane		
LC50 fish	11.4 mg/l - 96 Hours (Oncorhynchus mykiss, WAF)	
EC50 Daphnia	3 mg/l - 48 Hours (Daphnia magna, WAF)	
ErC50 algae	30 mg/l - 72 Hours (Pseudokirchneriella subcapitata, WAF)	

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Hydrocarbons, C6-C7, n-alkanes, isoa	Ikanes, cyclics, <5% n-hexane
NOEC chronic fish	2.045 mg/l - 28 days (Oncorhynchus mykiss, QSAR)
NOEC chronic algae	3 mg/l - 72 Hours (Pseudokirchneriella subcapitata, WAF, Growth rate)
Cyclohexane (110-82-7)	
LC50 fish	4.53 mg/l - 96 Hours - Pimephales promelas (OECD 203 method)
EC50 Daphnia	0.9 mg/l - 48 Hours - Daphnia magna (OECD 202 method)
EC50 72h - Algae [1]	3.428 mg/l - 72 Hours, Biomass - Pseudokirchneriella subcapitata (OECD 201 method)
EC50 72h - Algae [2]	> 4.425 mg/l - 72 Hours, Growth rate - Pseudokirchneriella subcapitata (OECD 201 method)
NOEC chronic algae	0.952 mg/l - 72 Hours, Growth rate - Pseudokirchneriella subcapitata (OECD 201 method)
Acetone (67-64-1)	
LC50 fish	5540 mg/l - 96 Hours (Oncorhynchus mykiss)
LC50 other aquatic organisms	8800 mg/l - 48 Hours (Daphnia pulex)
NOEC chronic crustacea	2212 mg/l -28 days (Daphnia pulex, reproduction)
NOEC chronic algae	530 mg/l - 8 days (Microcystis aeruginosa, Biomass)
Zinc oxide (1314-13-2)	
LC50 fish	0.169 – 0.78 mg/l
EC50 Daphnia	0.147 – 0.53 mg/l (Ceriodaphnia dubia)
NOEC chronic crustacea	0.014 - 0.4 mg/l (freshwater), 0.0056 - 0.9 mg/l (marine water)
NOEC chronic algae	0.019 mg/l (freshwater), 0.0078 - 0.67 mg/l (marine water)
IC50, algae, acute	0.136 mg/l (72 Hours, Selenastrum capricornutum, Growth rate)
n-hexane (110-54-3)	
LC50 fish	12.51 mg/l - 96 Hours (Growth, QSAR)
EC50 Daphnia	21.85 mg/l - 48 Hours (Mobility, QSAR)
ErC50 algae	9.285 mg/l - 48 Hours (QSAR)
NOEC chronic fish	2.8 mg/l - 28 days (Growth, QSAR)
NOEC chronic crustacea	4.888 mg/l - 28 days (reproduction, QSAR)
NOEC chronic algae	2.077 mg/l - 48 Hours (Growth rate, QSAR)
Rosin (8050-09-7)	
LC50 fish	1.7 mg/l - 96 Hours
EC50 Daphnia	1.6 mg/l - 48 Hours
ErC50 algae	39.6 mg/l - 72 Hours (Pseudokirchneriella subcapitata)
LL50	< 10 mg/l (96 Hours, Danio rerio, WAF)
EL50	911 mg/l (48 Hours, Dapnia magna, WAF)
NOELr	750 mg/l (48 Hours, Dapnia magna, WAF)

12.2. Persistence and degradability

2990 HYPALON Adhesive	
Persistence and degradability	No information available.

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according to Negalation (EO) No. 1567/2566 (NE/NOTI) with its amonament Negalation (EO) 2625/676				
Butanone (78-93-3)				
Persistence and degradability	Readily biodegradable.			
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane				
Persistence and degradability	Readily biodegradable.			
Cyclohexane (110-82-7)				
Persistence and degradability	Readily biodegradable.			
Acetone (67-64-1)				
Persistence and degradability	Readily biodegradable.			
Biodegradation	90 % -28 days (OECD 301B method)			
Zinc oxide (1314-13-2)				
Persistence and degradability	Not relevant for inorganic substances.			
Rosin (8050-09-7)				
Persistence and degradability	Readily biodegradable.			
12.3. Bioaccumulative potential				
2990 HYPALON Adhesive				
Bioaccumulative potential	No information available.			
Butanone (78-93-3)				
Log Pow	0.3 (40°C)			
Cyclohexane (110-82-7)				
BCF - Fish [1]	167 l/kg (QSAR)			
Log Pow	3.44 (20°C)			
Acetone (67-64-1)				
Log Pow	-0.23 (calculated value)			
Bioaccumulative potential	Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.			
Zinc oxide (1314-13-2)				
Bioaccumulative potential	Not relevant for inorganic substances.			
n-hexane (110-54-3)				
BCF - Fish [1]	501 (QSAR)			
Log Pow	4 (20 °C)			
Rosin (8050-09-7)				
Log Pow	> 3 - <= 6.2 (pH > 6 - < 7)			
12.4. Mobility in soil				
2990 HYPALON Adhesive				
Ecology - soil	No information available.			
Butanone (78-93-3)				
Ecology - soil	Miscible with water.			

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Cyclohexane (110-82-7)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.89 (calculated value)	
Acetone (67-64-1)		
Mobility in soil	Mobile	
Ecology - soil	Miscible with water.	
n-hexane (110-54-3)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.34 (QSAR)	
Rosin (8050-09-7)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.8759 – 5.37 (QSAR)	

12.5. Results of PBT and vPvB assessment

2990 HYPALON Adhesive

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Empty containers

should be taken to an approved waste handling site for recycling or disposal. The correct waste code must be determined by the producer of the waste, based on how the waste has

been produced.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR) : UN 1133 UN-No. (IMDG) : UN 1133 UN-No. (IATA) : UN 1133

14.2. UN proper shipping name

Proper Shipping Name : ADHESIVES
Proper Shipping Name (IMDG) : ADHESIVES
Proper Shipping Name (IATA) : Adhesives

Transport document description (ADR) : UN 1133 ADHESIVES, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS

Transport document description (IMDG) : UN 1133 ADHESIVES, 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

Transport document description (IATA) : UN 1133 Adhesives, 3, II, ENVIRONMENTALLY HAZARDOUS

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14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3 Hazard labels : 3



IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Danger labels (IATA) : 3



14.4. Packing group

Packing group : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes

Other information : IMDG 2.10.2.7: Marine Pollutants packaged in single or combination packagings containing

a net quantity per single or inner packaging of 5 lt or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of this Code relevant to marine pollutants provided the packagings meet the general requirements of 4.1.1.1, 4.1.1.2, and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria of inclusion in another hazards class all provisions of the

Code relevant to any additional hazards continue to apply.

14.6. Special precautions for user

Overland transport

Tunnel restriction code (ADR) : D/E

Transport by sea

No data available

Air transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)			
Reference code	Applicable on	Entry title or description	
3.	2990 HYPALON Adhesive ; Butanone ; Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane ; Cyclohexane ; Acetone ; n-hexane	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	
3(a)	2990 HYPALON Adhesive ; Butanone; Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane; Cyclohexane; Acetone; n-hexane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	
3(b)	2990 HYPALON Adhesive ; Butanone; Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane; Cyclohexane; Acetone; n-hexane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	
3(c)	2990 HYPALON Adhesive ; Hydrocarbons, C6-C7, n- alkanes, isoalkanes, cyclics, <5% n-hexane; Cyclohexane; n-hexane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	
40.	Butanone; Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane; Cyclohexane; Acetone; n-hexane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	
57.	Cyclohexane	Cyclohexane	

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Nomenclature	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Acetone	67-64-1	2914 11 00	ex 3824 99 92

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Please see https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf VOC content : $\leq 700 \text{ g/l}$

Contains substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Methylethylketone	Butanone	78-93-3	2914 12 00	Category 3		Annex I
Acetone		67-64-1	2914 11 00	Category 3		Annex I

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes				
Section	Changed item	Change	Comments	
1	Identification of the substance/mixture and of the company/undertaking	Modified		
2	Hazards identification	Modified		
3	Composition/information on ingredients	Modified		
8	Exposure controls/personal protection	Modified		
9	Physical and chemical properties	Modified		
11	Toxicological information	Modified		
12.	Ecological information	Modified		
13	Disposal considerations	Modified		
14	Transport information	Modified		
15	Regulatory information	Modified		
16	Other information	Modified		

Abbreviations and acronyms:		
	ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route)	
	BCF (Bioconcentration factor)	
	CAS (Chemical Abstracts Service) number	
	CLP (Classification, Labeling and Packaging)	
	DNEL (Derived No Effect Level)	
	EC (European Community)	
	EC50 (Effective Concentration 50%)	
	EN (European Norm)	
	IARC (International Agency for Research on Cancer)	
	IATA (International Air Transport Association)	
	IBC (Intermediate Bulk Container)	
	IMDG (International Maritime Dangerous Goods Code)	

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Abbreviations a	nd acronyms:
	IOELV (Indicative Occupational Exposure Limit)
	Koc (Soil adsorption coefficient)
	LC50 (Lethal Concentration 50%)
	LD50 (Lethal Dose 50%)
	OECD (Organisation for Economic Co-operation and Development)
	OEL (Occupational exposure limit)
	NOEC (No Observed Effect Concentration)
	PBT (Persistent, Bioaccumulative and Toxic)
	PNEC (Predicted No Effect Concentration)
	QSAR (Quantitative Structure-Activity Relationship)
	REACH (Registration, Evaluation and Authorisation of CHemicals)
	SCOEL (Scientific Committee on Occupational Exposure Limits)
	STEL (Short Term Exposure Limit)
	STP (Sewage treatment plant)
	TWA (Time Weighted Average)
	UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods)
	UVCB (Unknown or Variable composition, Complex reaction products or Biological materials)
	vPvB (very Persistent and very Bioaccumulative)
	WAF (Water Accommodated Fraction)

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: Classification procedure according to Regulation (EC) No. 1272/2008 [CLP]: Physical hazards: On basis of test data. Health hazards: Calculation method. Environmental hazards: Calculation method.

Full text of H- and EUH-statements:		
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2	
Asp. Tox. 1	Aspiration hazard, Category 1	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Flam. Liq. 2	Flammable liquids, Category 2	
H225	Highly flammable liquid and vapour.	
H304	May be fatal if swallowed and enters airways.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H336	May cause drowsiness or dizziness.	
H361f	Suspected of damaging fertility.	

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Full text of H- and EUH-statements:	
H373	May cause damage to organs through prolonged or repeated exposure.
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.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.