



SAFETY DATA SHEET

POLYGARD NITROCELLULOSE THINNERS

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

1.1. Product identifier

Product name POLYGARD NITROCELLULOSE THINNERS
Product number N011, B12941, 42305

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

Identified uses Nitrocellulose Paint and Wood Lacquer thinning agent
Uses advised against This product is not recommended for any industrial, professional or consumer use other than the identified uses stated above.

1.3. Details of the supplier of the safety data sheet

Supplier Miswa Chemicals Ltd
 Caswell Road
 Brackmills
 Northampton
 England
 NN4 7PW
 T: +44 (0)1604 701111
 F: +44 (0)1604 701120
 SDSAdmin@miswa.com

1.4. Emergency telephone number

Emergency telephone Tel.: +44 (0)1604 701111 (Miswa Office Hours Monday - Friday (0900Hrs - 1700Hrs))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

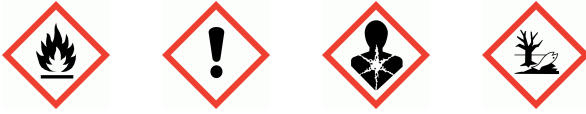
Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225
Health hazards Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Repr. 1B - H360D STOT SE 2 - H371 STOT SE 3 - H336 STOT RE 2 - H373 Asp. Tox. 1 - H304
Environmental hazards Aquatic Chronic 2 - H411
Human health Vapours and spray/mists in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting. Irritating to eyes. Repeated exposure may cause skin dryness or cracking.
Environmental The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
Physicochemical The product is highly flammable. Vapours may form explosive mixtures with air.

2.2. Label elements

POLYGARD NITROCELLULOSE THINNERS

Pictogram



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H336 May cause drowsiness or dizziness.
 H360D May damage the unborn child.
 H371 May cause damage to organs .
 H373 May cause damage to organs through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof electrical equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P260 Do not breathe vapour/ spray.
 P261 Avoid breathing vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
 P308+P313 IF exposed or concerned: Get medical advice/ attention.
 P312 Call a POISON CENTRE/doctor if you feel unwell.
 P314 Get medical advice/ attention if you feel unwell.
 P321 Specific treatment (see medical advice on this label).
 P331 Do NOT induce vomiting.
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
 P391 Collect spillage.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with national regulations.
 P102 Keep out of reach of children.

POLYGARD NITROCELLULOSE THINNERS

Supplemental label information

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains

TOLUENE, ISOPROPYL ACETATE, METHYL ACETATE, HEPTANE, ETHYL ACETATE, PROPAN-2-OL, ACETONE, XYLENE, BUTANONE, METHANOL, ISO-BUTANOL, BUTYL ACETATE -norm, ISOBUTYL ACETATE, 2-METHOXYPROPYL ACETATE

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

10-30%		
TOLUENE		
CAS number: 108-88-3	EC number: 203-625-9	REACH registration number: 01-2119471310-51-XXXX
Classification		
Flam. Liq. 2 - H225		
Skin Irrit. 2 - H315		
Repr. 2 - H361d		
STOT SE 3 - H336		
STOT RE 2 - H373		
Asp. Tox. 1 - H304		
10-30%		
ISOPROPYL ACETATE		
CAS number: 108-21-4	EC number: 203-561-1	REACH registration number: 01-2119537214-46-XXXX
Classification		
Flam. Liq. 2 - H225		
Eye Irrit. 2 - H319		
STOT SE 3 - H336		
10-30%		
METHYL ACETATE		
CAS number: 79-20-9	EC number: 201-185-2	REACH registration number: 01-2119459211-47-XXXX
Classification		
Flam. Liq. 2 - H225		
Eye Irrit. 2 - H319		
STOT SE 3 - H336		

POLYGARD NITROCELLULOSE THINNERS

HEPTANE		5-10%
CAS number: 142-82-5	EC number: 205-563-8	REACH registration number: 01-2119457603-38-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		
ETHYL ACETATE		5-10%
CAS number: 141-78-6	EC number: 205-500-4	REACH registration number: 01-2119475103-46-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		
PROPAN-2-OL		5-10%
CAS number: 67-63-0	EC number: 200-661-7	REACH registration number: 01-2119457558-25-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		
ACETONE		5-10%
CAS number: 67-64-1	EC number: 200-662-2	REACH registration number: 01-2119471330-49-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		

POLYGARD NITROCELLULOSE THINNERS

XYLENE 5-10%		
CAS number: 1330-20-7	EC number: 215-535-7	REACH registration number: 01-2119488216-32-XXXX
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315		
BUTANONE 1-5%		
CAS number: 78-93-3	EC number: 201-159-0	REACH registration number: 01-2119457290-43-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		
METHANOL 1-5%		
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-XXXX
Classification Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 STOT SE 1 - H370		
ISO-BUTANOL 1-5%		
CAS number: 78-83-1	EC number: 201-148-0	REACH registration number: 01-2119484609-23-XXXX
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335, H336		
BUTYL ACETATE -norm 1-5%		
CAS number: 123-86-4	EC number: 204-658-1	REACH registration number: 01-2119485493-29-XXXX
Classification Flam. Liq. 3 - H226 STOT SE 3 - H336		

POLYGARD NITROCELLULOSE THINNERS

ISOBUTYL ACETATE 1-5%		
CAS number: 110-19-0	EC number: 203-745-1	
Classification Flam. Liq. 2 - H225 STOT SE 3 - H336		
TERT-BUTYL METHYL ETHER 1-5%		
CAS number: 1634-04-4	EC number: 216-653-1	REACH registration number: 01-2119452786-27-XXXX
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315		
TETRAHYDROFURAN <1%		
CAS number: 109-99-9	EC number: 203-726-8	REACH registration number: 01-2119444314-46-XXXX
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Carc. 2 - H351 STOT SE 3 - H335		
HEXANE-norm <1%		
CAS number: 110-54-3	EC number: 203-777-6	REACH registration number: 01-2119480412-44-XXXX
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Repr. 2 - H361 STOT SE 3 - H336 STOT RE 2 - H373 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411		
ETHANOL <1%		
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319		

POLYGARD NITROCELLULOSE THINNERS

ISOBUTYL METHYL KETONE	<1%
CAS number: 108-10-1	EC number: 203-550-1
	REACH registration number: 01-2119473980-30-XXXX
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 4 - H332	
Eye Irrit. 2 - H319	
STOT SE 3 - H335	
PROPYL ACETATE	<1%
CAS number: 109-60-4	EC number: 203-686-1
	REACH registration number: 01-2119484620-39-XXXX
Classification	
Flam. Liq. 2 - H225	
Eye Irrit. 2 - H319	
STOT SE 3 - H336	
2-METHOXYPROPYL ACETATE	<1%
CAS number: 70657-70-4	EC number: 274-724-2
Classification	
Flam. Liq. 3 - H226	
Repr. 1B - H360D	
STOT SE 3 - H335	

The full text for all hazard statements is displayed in Section 16.

Composition comments This preparation may vary in composition, but typically may contain some or all of the above.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination. Keep affected person away from heat, sparks and flames. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. If in doubt, get medical attention promptly.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention. Show this Safety Data Sheet to the medical personnel.
Ingestion	Remove affected person from source of contamination. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Never give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

POLYGARD NITROCELLULOSE THINNERS

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting. Aspiration hazard if swallowed.

Ingestion Aspiration hazard if swallowed. Harmful: possible risk of irreversible effects if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Skin contact Product has a defatting effect on skin. May cause allergic contact eczema. Repeated exposure may cause skin dryness or cracking.

Eye contact May cause severe eye irritation.

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

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember. Heating may generate flammable vapours. Forms explosive mixtures with air. The product is highly flammable. Closed containers can burst violently when heated, due to excess pressure build-up.

Hazardous combustion products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3. Advice for firefighters

Protective actions during firefighting Move containers from fire area if it can be done without risk. Containers close to fire should be removed or cooled with water. Risk of re-ignition after fire has been extinguished. Risk of explosion. Avoid breathing fire gases or vapours. Do not use water jet as an extinguisher, as this will spread the fire. Contain and collect extinguishing water. Avoid the spillage or runoff entering drains, sewers or watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

POLYGARD NITROCELLULOSE THINNERS

Personal precautions

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with eyes and prolonged skin contact. Ensure suitable respiratory protection is worn during removal of spillages in confined areas.

6.2. Environmental precautions

Environmental precautions

Do not discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Contain spillage with sand, earth or other suitable non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Ventilate well, stop flow of gas or liquid if possible. Remove ignition sources. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Sewers designed to preclude formation of explosive concentrations of vapour may be permitted. Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. For waste disposal, see Section 13. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Avoid spilling. Avoid contact with skin and eyes. Eye wash facilities and emergency shower must be available when handling this product. Do not use in confined spaces without adequate ventilation and/or respirator. Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Use explosion proof electric equipment. During application and drying, solvent vapours will be emitted.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container. Take precautionary measures against static discharges.

Storage class

Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

TOLUENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 191 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 384 mg/m³

Sk

ISOPROPYL ACETATE

POLYGARD NITROCELLULOSE THINNERS

Long-term exposure limit (8-hour TWA): WEL 340 ppm 1200 mg/m³

Short-term exposure limit (15-minute): WEL 200 ppm 849 mg/m³

METHYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 200 ppm 616 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 770 mg/m³

HEPTANE

Long-term exposure limit (8-hour TWA): WEL 2085 mg/m³ 500 ppm

ETHYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 200 ppm

Short-term exposure limit (15-minute): WEL 400 ppm

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

ACETONE

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

XYLENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³

Sk

BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm 600 mg/m³

Short-term exposure limit (15-minute): WEL 300 ppm 899 mg/m³

Sk

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³

Long-term exposure limit (8-hour TWA): 2006/15/EC 200 ppm 260 mg/m³

Sk

ISO-BUTANOL

Long-term exposure limit (8-hour TWA): WEL 50 ppm 154 mg/m³

Short-term exposure limit (15-minute): WEL 75 ppm 231 mg/m³

BUTYL ACETATE -norm

Long-term exposure limit (8-hour TWA): WEL 150 ppm 724 mg/m³

Short-term exposure limit (15-minute): WEL 200 ppm 966 mg/m³

ISOBUTYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 150 ppm 724 mg/m³

Short-term exposure limit (15-minute): WEL 187 ppm 903 mg/m³

TETRAHYDROFURAN

Long-term exposure limit (8-hour TWA): WEL 50 ppm 150 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 300 mg/m³

Sk

HEXANE-norm

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m³

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

POLYGARD NITROCELLULOSE THINNERS

ISOBUTYL METHYL KETONE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 208 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 416 mg/m³

Sk

PROPYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 200 ppm 849 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 1060 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Sk = Can be absorbed through skin.

Ingredient comments

WEL = Workplace Exposure Limits

TOLUENE (CAS: 108-88-3)

DNEL

Industry - Dermal; Long term systemic effects: 384 mg/kg bw/day
 Industry - Inhalation; Long term systemic effects: 192 mg/m³
 Consumer - Inhalation; Short term Acute: 226 mg/m³
 Consumer - Dermal; Long term systemic effects: 226 mg/kg bw/day
 Consumer - Inhalation; Long term systemic effects: 56.5 mg/m³
 Consumer - Oral; Long term systemic effects: 8.13 mg/kg bw/day
 Consumer - Inhalation; Long term local effects: 56.5 mg/m³
 Industry - Inhalation; Long term local effects: 192 mg/m³
 Industry - Inhalation; Short term Acute: 384 mg/m³

PNEC

- Fresh water; 0.68 mg/l
 - Marine water; 0.68 mg/l
 - STP; 13.61 mg/l
 - Sediment (Freshwater); 16.39 mg/kg
 - Sediment (Marinewater); 16.39 mg/kg
 - Soil; 2.89 mg/kg
 - Intermittent release; 0.68 mg/l

ISOPROPYL ACETATE (CAS: 108-21-4)

DNEL

Workers - Inhalation; Long term systemic effects: 420 mg/m³
 Workers - Inhalation; Short term Acute: 850 mg/m³
 Workers - Inhalation; Long term local effects: 420 mg/m³
 Workers - Dermal; Long term systemic effects: 43 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 252 mg/m³
 General population - Inhalation; Short term Acute: 510 mg/m³
 General population - Inhalation; Long term local effects: 252 mg/m³
 General population - Dermal; Long term systemic effects: 26 mg/kg bw/day
 General population - Oral; Long term systemic effects: 26 mg/kg bw/day

PNEC

- Fresh water; 0.22 mg/l
 - Marine water; 0.022 mg/l
 - Intermittent release; 1.1 mg/l
 - STP; 190 mg/l
 - Sediment (Freshwater); 1.25 mg/kg sediment dw
 - Sediment (Marinewater); 0.125 mg/kg sediment dw
 - Soil; 0.35 mg/kg soil dw

METHYL ACETATE (CAS: 79-20-9)

POLYGARD NITROCELLULOSE THINNERS

DNEL

- Workers - Inhalation; Long term systemic effects: 610 mg/m³
- Workers - Inhalation; Long term local effects: 305 mg/m³
- Workers - Dermal; Long term systemic effects: 88 mg/kg bw/day
- General population - Inhalation; Long term systemic effects: 131 mg/m³
- General population - Inhalation; Long term local effects: 152 mg/m³
- General population - Dermal; Long term systemic effects: 44 mg/kg bw/day
- General population - Oral; Long term systemic effects: 44 mg/kg bw/day

PNEC

- Fresh water; 0.12 mg/l
- Marine water; 0.012 mg/l
- Intermittent release; 1.2 mg/l
- STP; 600 mg/l
- Sediment (Freshwater); 0.128 mg/kg sediment dw
- Sediment (Marinewater); 0.0128 mg/kg sediment dw
- Soil; 0.0416 mg/kg soil dw

HEPTANE (CAS: 142-82-5)

DNEL

- Workers - Inhalation; Long term systemic effects: 2085 mg/m³
- Workers - Dermal; Long term systemic effects: 300 mg/kg bw/day
- General population - Inhalation; Long term systemic effects: 447 mg/m³
- General population - Dermal; Long term systemic effects: 149 mg/kg bw/day
- General population - Oral; Long term systemic effects: 149 mg/kg bw/day

ETHYL ACETATE (CAS: 141-78-6)

DNEL

- Workers - Inhalation; Long term systemic effects: 734 mg/m³
- Workers - Inhalation; Short term Acute: 1468 mg/m³
- Workers - Inhalation; Long term local effects: 734 mg/m³
- Workers - Inhalation; Short term Acute: 1468 mg/m³
- Workers - Dermal; Long term systemic effects: 63 mg/kg bw/day
- General population - Inhalation; Long term systemic effects: 367 mg/m³
- General population - Inhalation; Short term Acute: 734 mg/m³
- General population - Inhalation; Long term local effects: 367 mg/m³
- General population - Inhalation; Short term Acute: 734 mg/m³
- General population - Dermal; Long term systemic effects: 37 mg/kg bw/day
- General population - Oral; Long term systemic effects: 4.5 mg/kg bw/day

PNEC

- Fresh water; 0.24 mg/l
- Marine water; 0.024 mg/l
- Intermittent release; 1.65 mg/l
- Sediment (Freshwater); 1.15 mg/kg sediment dw
- Sediment (Marinewater); 0.115 mg/kg sediment dw
- Soil; 0.148 mg/kg soil dw

PROPAN-2-OL (CAS: 67-63-0)

DNEL

- Industry - Inhalation; Long term systemic effects: 500 mg/m³
- Consumer - Dermal; Long term systemic effects: 319 mg/kg/day
- Consumer - Oral; Long term systemic effects: 26 mg/kg/day
- Consumer - Inhalation; Long term systemic effects: 89 mg/m³
- Industry - Dermal; Long term systemic effects: 888 mg/kg/day

POLYGARD NITROCELLULOSE THINNERS

- PNEC**
- Fresh water; 140.9 mg/l
 - Marine water; 140.9 mg/l
 - Intermittent release; 140.9 mg/l
 - Sediment (Freshwater); 552 mg/kg
 - Sediment (Marinewater); 552 mg/kg
 - STP; 2251 mg/l
 - Soil; 28 mg/kg

ACETONE (CAS: 67-64-1)

- DNEL**
- Industry - Dermal; Long term : 186 mg/kg/day
 - Industry - Inhalation; Short term : 2420 mg/m³
 - Industry - Inhalation; Long term : 1210 mg/m³
 - Consumer - Oral; Long term : 62 mg/kg/day
 - Consumer - Dermal; Long term : 62 mg/kg/day
 - Consumer - Inhalation; Long term : 200 mg/m³

- PNEC**
- Fresh water; 10.6 mg/l
 - Marine water; 1.06 mg/l
 - Sediment (Freshwater); 30.4 mg/kg sediment dw
 - Sediment (Marinewater); 3.04 mg/kg sediment dw
 - Soil; 0.112 mg/kg soil dw
 - STP; 29.5 mg/l

XYLENE (CAS: 1330-20-7)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 77 mg/m³
 - Workers - Inhalation; Short term Acute: 289 mg/m³
 - Workers - Dermal; Long term systemic effects: 180 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 14.8 mg/m³
 - General population - Inhalation; Short term Acute: 174 mg/m³
 - General population - Dermal; Long term systemic effects: 108 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 1.6 mg/kg bw/day

- PNEC**
- Fresh water; 0.327 mg/l
 - Marine water; 0.327 mg/l
 - Intermittent release; 0.327 mg/l
 - STP; 6.58 mg/l
 - Sediment (Freshwater); 12.46 mg/kg sediment dw
 - Sediment (Marinewater); 12.46 mg/kg sediment dw
 - Soil; 2.31 mg/kg soil dw

BUTANONE (CAS: 78-93-3)

- DNEL**
- Industry - Dermal; Long term systemic effects: 1161 mg/kg bw/day
 - Industry - Inhalation; Long term systemic effects: 600 mg/m³
 - Consumer - Dermal; Long term systemic effects: 412 mg/kg bw/day
 - Consumer - Inhalation; Long term systemic effects: 106 mg/m³

- PNEC**
- Fresh water; 55.8 mg/l
 - Marine water; 55.8 mg/l
 - Sediment (Freshwater), Sediment (Marinewater); 284.74 mg/kg sediment dw
 - Soil; 22.5 mg/kg soil dw

METHANOL (CAS: 67-56-1)

POLYGARD NITROCELLULOSE THINNERS

DNEL

Industry - Dermal; Short term Acute: 40 mg/kg bw/day
 Industry - Dermal; Long term systemic effects: 40 mg/kg bw/day
 Industry - Inhalation; Short term Acute: 260 mg/m³
 Industry - Inhalation; Long term systemic effects: 260 mg/m³
 Consumer - Dermal; Short term Acute: 8 mg/kg bw/day
 Consumer - Dermal; Long term systemic effects: 8 mg/kg bw/day
 Consumer - Inhalation; Long term systemic effects: 50 mg/m³
 Industry - Inhalation; Short term Acute: 260 mg/m³
 Industry - Inhalation; Long term local effects: 260 mg/m³
 Consumer - Inhalation; Short term Acute: 50 mg/m³
 Consumer - Inhalation; Long term local effects: 50 mg/m³

PNEC

- Fresh water; 20.8 mg/l
- Marine water; 2.08 mg/l
- Soil; 3.18 mg/kg soil dw
- STP; 100 mg/l
- Sediment (Freshwater); 77 mg/kg sediment dw
- Intermittent release; 1540 mg/l
- Sediment (Marinewater); 7.7 mg/kg sediment dw

ISO-BUTANOL (CAS: 78-83-1)

DNEL

Industry - Inhalation; Long term local effects: 310 mg/m³
 General population - Inhalation; Long term local effects: 55 mg/m³

PNEC

- Fresh water; 0.4 mg/l
- Marine water; 0.04 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 1.56 mg/kg sediment dw
- Sediment (Marinewater); 0.156 mg/kg sediment dw
- Soil; 0.076 mg/kg soil dw

BUTYL ACETATE -norm (CAS: 123-86-4)

DNEL

Workers - Inhalation; Long term systemic effects: 480 mg/m³
 Workers - Inhalation; Short term Acute: 960 mg/m³
 Workers - Inhalation; Long term local effects: 480 mg/m³
 General population - Inhalation; Long term systemic effects: 102.34 mg/m³
 General population - Inhalation; Short term Acute: 859.7 mg/m³
 General population - Inhalation; Long term local effects: 102.34 mg/m³

PNEC

- Fresh water; 0.18 mg/l
- Marine water; 0.018 mg/l
- Intermittent release; 0.36 mg/l
- STP; 35.6 mg/l
- Sediment (Freshwater); 0.981 mg/kg sediment dw
- Sediment (Marinewater); 0.0981 mg/kg sediment dw
- Soil; 0.0903 mg/kg soil dw

ISOBUTYL ACETATE (CAS: 110-19-0)

DNEL

Workers - Inhalation; Long term local effects, systemic effects: 480 mg/m³
 Workers - Inhalation; Short term Acute: 960 mg/m³
 General population - Inhalation; Long term local effects, systemic effects: 102.34 mg/m³
 General population - Inhalation; Short term Acute: 859.7 mg/m³

POLYGARD NITROCELLULOSE THINNERS

- PNEC**
- Fresh water; 0.17 mg/l
 - Marine water; 0.017 mg/l
 - Intermittent release; 0.34 mg/l
 - STP; 200 mg/l
 - Sediment (Freshwater); 0.877 mg/kg sediment dw
 - Sediment (Marinewater); 0.0877 mg/kg sediment dw
 - Soil; 0.0755 mg/kg soil dw

TERT-BUTYL METHYL ETHER (CAS: 1634-04-4)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 178.5 mg/m³
 - Workers - Inhalation; Short term local effects: 357 mg/m³
 - Workers - Dermal; Long term systemic effects: 5100 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 53.6 mg/m³
 - General population - Inhalation; Short term local effects: 214 mg/m³
 - General population - Dermal; Long term systemic effects: 3570 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 7.1 mg/kg bw/day

- PNEC**
- Fresh water; 5.1 mg/l
 - Intermittent release; 47.2 mg/l
 - Marine water; 0.26 mg/l
 - STP; 71 mg/l
 - Sediment (Freshwater); 23 mg/kg sediment dw
 - Sediment (Marinewater); 1.17 mg/kg sediment dw
 - Soil; 1.56 mg/kg soil dw

TETRAHYDROFURAN (CAS: 109-99-9)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 150 mg/m³
 - Workers - Inhalation; Short term systemic effects, local effects, Acute: 300 mg/m³
 - Workers - Inhalation; Long term local effects: 150 mg/m³
 - Workers - Dermal; Long term systemic effects: 25 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 62 mg/m³
 - General population - Inhalation; Short term Acute, local effects, systemic effects: 150 mg/m³
 - General population - Inhalation; Long term local effects: 75 mg/m³
 - General population - Dermal; Long term systemic effects: 15 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 15 mg/kg bw/day

- PNEC**
- Fresh water; 4.32 mg/l
 - Marine water; 0.432 mg/l
 - STP; 4.6 mg/l
 - Sediment (Freshwater); 23.3 mg/kg sediment dw
 - Sediment (Marinewater); 2.33 mg/kg sediment dw
 - Soil; 2.13 mg/kg soil dw
 - Intermittent release; 21.6 mg/l

HEXANE-norm (CAS: 110-54-3)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 75 mg/m³
 - Workers - Dermal; Long term systemic effects: 11 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 16 mg/m³
 - General population - Dermal; Long term systemic effects: 5.3 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 4 mg/kg bw/day

- PNEC**
- No PNEC available.

POLYGARD NITROCELLULOSE THINNERS

ETHANOL (CAS: 64-17-5)

DNEL

Workers - Dermal; Long term systemic effects: 343 mg/kg
 Workers - Inhalation; Long term systemic effects: 950 mg/m³
 Workers - Inhalation; Short term Acute, local effects: 1900 mg/m³
 Consumer - Inhalation; Short term Acute, local effects: 950 mg/m³
 Consumer - Dermal; Long term systemic effects: 206 mg/kg
 Consumer - Inhalation; Long term systemic effects: 114 mg/m³
 Consumer - Oral; Long term systemic effects: 87 mg/kg

PNEC

- Fresh water; 0.96 mg/l
- Marine water; 0.79 mg/l
- STP; 580 mg/l
- Intermittent release; 2.75 mg/l
- Sediment (Freshwater); 3.6 mg/kg sediment dw
- Sediment (Marinewater); 2.9 mg/kg sediment dw
- Soil; 0.63 mg/kg soil dw

ISOBUTYL METHYL KETONE (CAS: 108-10-1)

DNEL

Industry - Inhalation; Short term Acute: 208 mg/m³
 Industry - Dermal; Long term : 11.8 mg/kg bw/day
 Industry - Inhalation; Long term systemic effects: 83 mg/m³
 Industry - Inhalation; Long term local effects: 83 mg/m³
 Consumer - Inhalation; Short term Acute: 155.2 mg/m³
 Consumer - Dermal; Long term systemic effects: 4.2 mg/kg/day
 Consumer - Oral; Long term systemic effects: 4.2 mg/kg bw/day
 General population - Inhalation; Long term systemic effects, local effects: 14.7 mg/m³

PNEC

- Fresh water; 0.6 mg/l
- Marine water; 0.06 mg/l
- Sediment (Freshwater); 8.27 mg/kg sediment dw
- Sediment (Marinewater); 0.83 mg/kg sediment dw
- Soil; 1.3 mg/kg soil dw
- Intermittent release; 1.5 mg/l
- STP; 27.5 mg/l

PROPYL ACETATE (CAS: 109-60-4)

DNEL

Workers - Inhalation; Long term systemic effects, local effects: 420 mg/m³
 Workers - Inhalation; Short term Acute: 840 mg/m³
 General population - Inhalation; Long term systemic effects, local effects: 149 mg/m³
 General population - Inhalation; Short term Acute: 298 mg/m³

PNEC

- Fresh water; 0.06 mg/l
- Marine water; 0.006 mg/l
- Intermittent release; 0.6 mg/l
- STP; 1 mg/l
- Sediment (Freshwater); 0.16 mg/kg sediment dw
- Sediment (Marinewater); 0.016 mg/kg sediment dw
- Soil; 0.0215 mg/kg soil dw

8.2. Exposure controls

POLYGARD NITROCELLULOSE THINNERS

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Contact lenses should not be worn when working with this chemical. The following protection should be worn: Chemical splash goggles.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Use gloves with insulation for thermal protection (EN 407), when needed. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other skin and body protection

Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station and safety shower. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin. Use appropriate skin cream to prevent drying of skin.

Hygiene measures

Provide eyewash station and safety shower. Wash promptly with soap and water if skin becomes contaminated. Promptly remove non-impervious clothing that becomes contaminated. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Initial boiling point and range	55-160°C @ 760 mm Hg The product is a mixture of solvents that can vary; this will affect the initial and final boiling point. The range stated is to be taken as typical.

POLYGARD NITROCELLULOSE THINNERS

Flash point	-20°C Closed cup. The product is a mixture of solvents. The flash point given is for the constituent with the lowest flash point (Acetone).
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1 % Upper flammable/explosive limit: 36.5 %
Vapour pressure	<110 kPa @ °C
Vapour density	> 1
Relative density	0.8-0.9 @ 20°C
Auto-ignition temperature	>203°C

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 100 %.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	No particular stability concerns. Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember. Will not polymerise.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.
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10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
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ATE oral (mg/kg)	3,333.33
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Acute toxicity - dermal

Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
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ATE dermal (mg/kg)	6,875.0
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Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Harmful if inhaled.
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ATE inhalation (gases ppm)	4,500.0
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ATE inhalation (vapours mg/l)	11.0
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POLYGARD NITROCELLULOSE THINNERS

ATE inhalation (dusts/mists mg/l)	1.5
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes skin irritation.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Reproductive toxicity</u>	
Reproductive toxicity - development	May damage the unborn child.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause damage to organs. May cause drowsiness or dizziness.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways.
<u>General information</u>	
General information	To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated.
<u>Inhalation</u>	
Inhalation	Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. Symptoms following overexposure may include the following: Vapours in high concentrations are anaesthetic. Headache. Fatigue. Dizziness. Central nervous system depression.
<u>Ingestion</u>	
Ingestion	Harmful: possible risk of irreversible effects if swallowed. May be harmful if swallowed and enters airways. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
<u>Skin contact</u>	
Skin contact	Product has a defatting effect on skin. May cause allergic contact eczema. Repeated exposure may cause skin dryness or cracking.
<u>Eye contact</u>	
Eye contact	Irritating to eyes. May cause severe eye irritation.
<u>Acute and chronic health hazards</u>	
Acute and chronic health hazards	May cause unconsciousness, blindness and possibly death. Repeated exposure may cause chronic eye irritation. May cause chemical eye burns. Acute eczematous dermatitis, contact type erythema, oedema, papules, vesicles, bullae, crusts and desquamation. Swallowing concentrated chemical may cause severe internal injury. May cause damage to the liver and kidneys.
<u>Route of exposure</u>	
Route of exposure	Inhalation Ingestion Skin and/or eye contact
<u>Target organs</u>	
Target organs	Central nervous system Respiratory system, lungs Eyes
<u>Medical symptoms</u>	
Medical symptoms	Irritation of eyes and mucous membranes. Unconsciousness. Upper respiratory irritation. Always assume aspiration may have occurred.
<u>Medical considerations</u>	
Medical considerations	Pre-existing respiratory disorders and lung disease.
<u>Toxicological information on ingredients.</u>	

TOLUENE

Acute toxicity - oral

POLYGARD NITROCELLULOSE THINNERS

Acute toxicity oral (LD₅₀ mg/kg) 5,580.0

Species Rat

ATE oral (mg/kg) 5,580.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 12,267.0

Species Rabbit

ATE dermal (mg/kg) 12,267.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 28.1

Species Rat

Notes (inhalation LC₅₀)

ATE inhalation (vapours mg/l) 28.1

Skin corrosion/irritation

Animal data Erythema/eschar score: A mean erythema score exceeding 2 at day 7 Oedema score: 1.43 at 72 hours Irritating.

Human skin model test Not available.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation Not considered to be a skin sensitizer

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organs Central nervous system

Aspiration hazard

POLYGARD NITROCELLULOSE THINNERS

Aspiration hazard	May be fatal if swallowed and enters airways. The fluid can enter the lungs and cause damage (chemical pneumonitis, possibly fatal).
Inhalation	Harmful by inhalation. Vapours may cause headache, fatigue, dizziness and nausea. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.
Ingestion	Harmful: may cause lung damage if swallowed. May cause stomach pain or vomiting. Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.
Skin contact	Irritating to skin. Product has a defatting effect on skin. Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin.
Eye contact	Irritating to eyes. A single exposure may cause the following adverse effects: Corneal damage.
Acute and chronic health hazards	Absorption of large quantities can lead to inebriation, unconsciousness, respiratory arrest and cardiovascular failure.

ISOPROPYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 6,750.0

Species Rat

ATE oral (mg/kg) 6,750.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 17,440.0

Species Rabbit

ATE dermal (mg/kg) 17,440.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 50.6

Species Rat

ATE inhalation (vapours mg/l) 50.6

Skin corrosion/irritation

Animal data Conclusive data but not sufficient for classification.

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes: Category 2.

Respiratory sensitisation

POLYGARD NITROCELLULOSE THINNERS

Respiratory sensitisation	Data lacking.
<u>Skin sensitisation</u>	
Skin sensitisation	Data lacking.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Conclusive data but not sufficient for classification.
<u>Carcinogenicity</u>	
Carcinogenicity	Data lacking.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Conclusive data but not sufficient for classification.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Inhalation: May cause drowsiness and dizziness.
Target organs	Central nervous system
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Conclusive data but not sufficient for classification.
<u>Aspiration hazard</u>	
Aspiration hazard	No data available.

METHYL ACETATE

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	6,482.0
Species	Rat
ATE oral (mg/kg)	6,482.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	2,001.0
Species	Rat
ATE dermal (mg/kg)	2,001.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ vapours mg/l)	49.4
Species	Rabbit
ATE inhalation (vapours mg/l)	49.4
<u>Skin corrosion/irritation</u>	
Animal data	Skin - rabbit - Mild skin irritation - 24 hr
<u>Serious eye damage/irritation</u>	

POLYGARD NITROCELLULOSE THINNERS

Serious eye damage/irritation	Eye - Rabbit - Irritation - 24 hours. Irritating to eyes: Category 2.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Conclusive data but not sufficient for classification.
<u>Skin sensitisation</u>	
Skin sensitisation	Conclusive data but not sufficient for classification.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Conclusive data but not sufficient for classification.
<u>Carcinogenicity</u>	
Carcinogenicity	Data lacking.
IARC carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Data lacking.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause drowsiness and dizziness.
Target organs	Central nervous system
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Conclusive data but not sufficient for classification.

HEPTANE

<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ vapours mg/l)	73.5
Species	Rat
ATE inhalation (vapours mg/l)	73.5
<u>Skin corrosion/irritation</u>	
Animal data	Irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Data lacking.
<u>Skin sensitisation</u>	
Skin sensitisation	Data lacking.
<u>Germ cell mutagenicity</u>	

POLYGARD NITROCELLULOSE THINNERS

Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Conclusive data but not sufficient for classification.
<u>Carcinogenicity</u>	
Carcinogenicity	Data lacking.
IARC carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Conclusive data but not sufficient for classification.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause drowsiness and dizziness.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Conclusive data but not sufficient for classification.
Target organs	Central nervous system
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways.

HEXANE-norm

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg)	15,840.0
Species	Rat
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
ATE oral (mg/kg)	15,840.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg)	2,001.0
Species	Rabbit
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
ATE dermal (mg/kg)	2,001.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l)	168.0
Species	Rat
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l)	168.0

Skin corrosion/irritation

POLYGARD NITROCELLULOSE THINNERS

Animal data	Causes skin irritation.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Suspected of damaging fertility.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause drowsiness and dizziness.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organs	Central nervous system
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways.

SECTION 12: Ecological Information

Ecotoxicity The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.

TOLUENE

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

POLYGARD NITROCELLULOSE THINNERS

Ecological information on ingredients.

TOLUENE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 24 hours: 5.4 mg/l, Marinewater fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 3.78 mg/l, Freshwater invertebrates
Acute toxicity - aquatic plants	NOEC, 7 days: >400 mg/l, Algae

ISOPROPYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 400 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: >1000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	ErC50, 72 hours: 370 mg/l, Pseudokirchneriella subcapitata

METHYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 250-350 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 1026.7 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: >120 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC ₅₀ , 16 hours: 6000 mg/l, Pseudomonas Putida

HEPTANE

Acute aquatic toxicity

LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 4mg/l - 24h mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 1.5mg/l mg/l, Daphnia magna LC ₅₀ , 96 hours: 0.1 mg/l, Freshwater invertebrates

Chronic aquatic toxicity

M factor (Chronic)	1
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HEXANE-norm

Toxicity Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 2.5 mg/l, Fish, Pimephales promelas (Fat-head Minnow)
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POLYGARD NITROCELLULOSE THINNERS

Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 3.878 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEL, 48 hours: 2.077 mg/l, Pseudokirchneriella subcapitata
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - aquatic invertebrates	NOELR, 21 days: 4.888 mg/l, Daphnia magna

12.2. Persistence and degradability

Ecological information on ingredients.

TOLUENE

Persistence and degradability	The substance is readily biodegradable.
Phototransformation	Water - DT ₅₀ 50: 2.59 days

ISOPROPYL ACETATE

Persistence and degradability	The product is readily biodegradable.
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METHYL ACETATE

Persistence and degradability	The product is readily biodegradable.
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HEPTANE

Persistence and degradability	The substance is readily biodegradable.
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HEXANE-norm

Persistence and degradability	The product is readily biodegradable.
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12.3. Bioaccumulative potential

Ecological information on ingredients.

TOLUENE

Bioaccumulative potential	The substance has a low bioaccumulation potential in fish and molluscs and a rapid elimination rate indicates toluene is not likely to accumulate in the food chain. BCF: 8, Clupea harengus (Herring)
Partition coefficient	log Pow: 2.73

ISOPROPYL ACETATE

Bioaccumulative potential	No data available on bioaccumulation.
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METHYL ACETATE

POLYGARD NITROCELLULOSE THINNERS

Bioaccumulative potential Low potential.

HEPTANE

Bioaccumulative potential Indication of bioaccumulation.

HEXANE-norm

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Ecological information on ingredients.

TOLUENE

Mobility The substance will evaporate readily from soil surfaces and be broken by microbial action. It is possible that some will be transferred through the soil layers in groundwater.

Adsorption/desorption coefficient Water - Koc: > 34 @ °C

Surface tension 27.73 mN/m @ 25°C

ISOPROPYL ACETATE

Mobility No data available.

HEPTANE

Mobility No data available.

HEXANE-norm

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Ecological information on ingredients.

TOLUENE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

ISOPROPYL ACETATE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

METHYL ACETATE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

POLYGARD NITROCELLULOSE THINNERS

HEPTANE

Results of PBT and vPvB assessment No data available.

HEXANE-norm

Results of PBT and vPvB assessment No data available.

12.6. Other adverse effects

Ecological information on ingredients.

TOLUENE

Other adverse effects The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential. May effect germination and growth rates of plants if soil contamination occurs.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information If this product becomes waste it is to be treated as hazardous waste. Any other constituents or contaminants in the waste stream must be taken into account when classifying the waste. In the EU, the European Waste Catalogue Code to be assigned it is dependant on the process giving rise to the waste. In the absence of any such processes having taken place EWC 140603* (other solvents and solvent mixtures) may be used. Hazardous waste must be suitably contained, stored, packaged and transported (see sections 7 and 4 for details). In the UK only waste carriers registered with the Environmental Agency may transport waste.

Disposal methods Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. Containers should be thoroughly emptied before disposal because of the risk of an explosion.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1263
UN No. (IMDG)	1263
UN No. (ICAO)	1263
UN No. (ADN)	1263

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	PAINT RELATED MATERIAL (CONTAINS HEPTANE, HEXANE-norm)
Proper shipping name (IMDG)	PAINT RELATED MATERIAL (CONTAINS HEPTANE, HEXANE-norm)
Proper shipping name (ICAO)	PAINT RELATED MATERIAL (CONTAINS HEPTANE, HEXANE-norm)
Proper shipping name (ADN)	PAINT RELATED MATERIAL (CONTAINS HEPTANE, HEXANE-norm)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1

POLYGARD NITROCELLULOSE THINNERS

ADR/RID label	3
IMDG class	3
ICAO class/division	3

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	2
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation	Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). 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 (as amended).
Guidance	Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

POLYGARD NITROCELLULOSE THINNERS

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	HS&E Manager.
Revision date	06/11/2018
Revision	2
Supersedes date	19/05/2017
SDS number	20563
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H360D May damage the unborn child. H361 Suspected of damaging fertility or the unborn child. H361d Suspected of damaging the unborn child. H370 Causes damage to organs (Central nervous system, Optic Nerve (Nervus Opticus)). H371 May cause damage to organs . H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs (Central nervous system) 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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.