



SAFETY DATA SHEET

URAD DD27 ND

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

1.1. Product identifier

Product name URAD DD27 ND

Product number 59260

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

Identified uses Resin. Surface coating

1.3. Details of the supplier of the safety data sheet

Supplier Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
+44 1274 267306
SDS.EMEA@univarsolutions.com

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 59260

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226

Health hazards Eye Dam. 1 - H318 STOT SE 3 - H336

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements EUH208 Contains ISOBUTYL ACRYLATE. May produce an allergic reaction.
H226 Flammable liquid and vapour.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 Use explosion-proof electrical equipment. P261 Avoid breathing gas, fume, vapours or spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
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Contains	HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE, BUTANOL-norm
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2.3. Other hazards

Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE			10 - 30%
CAS number: —	EC number: 918-811-1	REACH registration number: 01-2119463583-34-XXXX	
Classification STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411			
BUTANOL-norm			1 - 5%
CAS number: 71-36-3	EC number: 200-751-6	REACH registration number: 01-2119484630-38-XXXX	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335, H336			

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ISOBUTYL ACRYLATE**0.1 - 0.3%**

CAS number: 106-63-8

EC number: 203-417-8

REACH registration number: 01-
2119451170-53-XXXX**Classification**

Flam. Liq. 3 - H226

Acute Tox. 4 - H312

Acute Tox. 4 - H332

Skin Irrit. 2 - H315

Skin Sens. 1 - H317

STOT SE 3 - H335

Aquatic Chronic 3 - H412

NAPHTHALENE**0.1 - 0.3%**

CAS number: 91-20-3

EC number: 202-049-5

M factor (Acute) = 1

M factor (Chronic) = 1

Classification

Flam. Sol. 2 - H228

Acute Tox. 4 - H302

Carc. 2 - H351

Aquatic Acute 1 - H400

Aquatic Chronic 1 - H410

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

Composition comments The data shown are in accordance with the latest EC Directives.**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention immediately.

Ingestion

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Get medical attention immediately.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist after washing.

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 immediately. Continue to rinse.

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Protection of first aiders

First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

Inhalation

May cause drowsiness or dizziness. Gas or vapour in high concentrations may irritate the respiratory system.
Symptoms following overexposure may include the following: Coughing. Headache. Nausea, vomiting. Drowsiness, dizziness, disorientation, vertigo. Vapours in high concentrations are narcotic.

Ingestion

May cause discomfort if swallowed. Symptoms following overexposure may include the following: Central nervous system depression. Gastrointestinal symptoms, including upset stomach.

Skin contact

Repeated exposure may cause skin dryness or cracking. The product contains a small amount of sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.

Eye contact

Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.
Symptoms following overexposure may include the following: Pain. Redness. Profuse watering of the eyes.

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

Notes for the doctor

No specific recommendations. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

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

Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.
Harmful to aquatic life with long lasting effects.
When heated, vapours/gases hazardous to health may be formed. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products

Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO₂). Carbon monoxide (CO). Acid smoke or fumes. Aldehydes. Acids - organic.

5.3. Advice for firefighters

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Protective actions during firefighting	Evacuate area. No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Fire-water run-off in sewers may create fire or explosion hazard. Contain and collect extinguishing water.
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

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Follow precautions for safe handling described in this safety data sheet. Flammable liquid and vapour. Vapours may form explosive mixtures with air. Approach the spillage from upwind. Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Provide adequate ventilation. Avoid inhalation of vapours and contact with skin and eyes. Do not touch or walk into spilled material. No smoking, sparks, flames or other sources of ignition near spillage. Eliminate all sources of ignition. Use only non-sparking tools.
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6.2. Environmental precautions

Environmental precautions	Harmful to aquatic life with long lasting effects. Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Harmful to aquatic life with long lasting effects. Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Eliminate all sources of ignition. Take precautionary measures against static discharge. No smoking, sparks, flames or other sources of ignition near spillage. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with inert, damp, non-combustible material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Use only non-sparking tools. Clean contaminated objects and areas thoroughly, observing environmental regulations.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Usage precautions

Handle all packages and containers carefully to minimise spills. Wear protective clothing as described in Section 8 of this safety data sheet.

Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of vapours and contact with skin and eyes. Eliminate all sources of ignition. Earth container and transfer equipment to eliminate sparks from static electricity. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use only non-sparking tools. Use explosion-proof electrical, ventilating and lighting equipment.

Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Provide eyewash station and safety shower.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Storage tanks and other containers must be earthed. Earth container and transfer equipment to eliminate sparks from static electricity.

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid exposure to high temperatures or direct sunlight. Container must be kept tightly closed when not in use.

Store away from the following materials: Oxidising materials.

Store at temperatures between 5°C/41°F and 30°C/86°F.

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

BUTANOL-norm

Short-term exposure limit (15-minute): WEL 50 ppm 154 mg/m³

Sk

NAPHTHALENE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 50 mg/m³

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Ingredient comments

No exposure limits known for ingredient(s).

DNEL

Industry - Dermal; Long term systemic effects: 12.5 mg/kg/day

Industry - Inhalation; Long term systemic effects: 151 mg/m³

Consumer - Oral; Long term systemic effects: 7.5 mg/kg/day

Consumer - Inhalation; Long term systemic effects: 32 mg/m³

Consumer - Dermal; Long term systemic effects: 7.5 mg/kg/day

BUTANOL-norm (CAS: 71-36-3)

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Ingredient comments	WEL = Workplace Exposure Limits
DNEL	Workers - Inhalation; Long term local effects: 310 mg/m ³ General population - Dermal; Long term local effects: 55 mg/m ³ General population - Oral; Long term systemic effects: 3.125 mg/kg/day
PNEC	- Fresh water; 0.082 mg/l - marine water; 0.0082 mg/l - Intermittent release; 2.25 mg/l - STP; 2476 mg/l - Sediment (Freshwater); 0.178 mg/kg - Sediment (Marinewater); 0.0178 mg/kg - Soil; 0.015 mg/kg

ISOBUTYL ACRYLATE (CAS: 106-63-8)

DNEL	Workers - Inhalation; Long term local effects: 11 mg/m ³ Workers - Dermal; Short term local effects: 280 µg/cm ² General population - Inhalation; Long term local effects: 1.27 mg/m ³ General population - Dermal; Short term local effects: 0.28 mg/cm ²
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NAPHTHALENE (CAS: 91-20-3)

DNEL	Workers - Inhalation; Long term systemic effects: 25 mg/m ³ Workers - Inhalation; Long term local effects: 25 mg/m ³ Workers - Dermal; Long term systemic effects: 3.57 mg/kg/day
PNEC	- Fresh water; 2.4 µg/l - marine water; 2.4 µg/l - Intermittent release; 20 µg/l - Sediment (Freshwater); 0.0672 mg/kg - Sediment (Marinewater); 0.0672 mg/kg - Soil; 0.0533 mg/kg - STP; 2.9 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Use explosion-proof electrical equipment. Avoid inhalation of vapours and contact with skin and eyes. Provide eyewash station and safety shower.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. To protect hands from chemicals, gloves should comply with European Standard EN374. Frequent changes are recommended. It is recommended that gloves are made of the following material: Viton rubber (fluoro rubber). Thickness: 0.7 mm The selected gloves should have a breakthrough time of at least 4 - 8 hours. Nitrile rubber. Thickness: 0.4 mm The selected gloves should have a breakthrough time of at least < 1 hours.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Wear fire/flammable resistant/retardant clothing. For the greatest protection, clothing should include anti-static overalls, boots and gloves.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Wash contaminated clothing before reuse.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Organic vapour filter. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
Environmental exposure controls	Keep container tightly sealed when not in use. 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	Viscous liquid.
Colour	Colourless.
Odour	Characteristic. Organic solvents.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	40°C Estimated value.
Evaporation rate	No information available.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	No information available.
Vapour density	No information available.

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Relative density	0.995
Bulk density	995 kg/m ³
Solubility(ies)	Immiscible with water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	1000 - 2000 mPa s @ 20°C > 1005 cSt @ 20°C > 20.5 cSt @ 40°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	Not determined.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	See Section 10.3 (Possibility of hazardous reactions) for further information.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Flammable liquid and vapour. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. The following materials may react with the product: Oxidising materials.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight. Take precautionary measures against static discharge. Containers can burst violently or explode when heated, due to excessive pressure build-up. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.
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10.5. Incompatible materials

Materials to avoid	Avoid contact with the following materials: Oxidising materials.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO ₂). Carbon dioxide (CO ₂). Acrid smoke or fumes. Aldehydes. Acids - organic.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD ₅₀)	Based on available data the classification criteria are not met.
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ATE oral (mg/kg)	26,333.33
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Acute toxicity - dermal

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Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Contains a substance which may be potentially carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation

May cause drowsiness or dizziness. Gas or vapour in high concentrations may irritate the respiratory system.

Symptoms following overexposure may include the following: Coughing. Headache. Nausea, vomiting. Drowsiness, dizziness, disorientation, vertigo. Vapours in high concentrations are narcotic.

Ingestion

May cause discomfort if swallowed. Symptoms following overexposure may include the following: Central nervous system depression. Gastrointestinal symptoms, including upset stomach.

Skin contact

Repeated exposure may cause skin dryness or cracking. The product contains a small amount of sensitising substance. May cause skin sensitisation or allergic reactions in sensitive individuals.

Eye contact

Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Symptoms following overexposure may include the following: Pain. Redness. Profuse watering of the eyes.

Toxicological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 7,050.0

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Species	Rat
ATE oral (mg/kg)	7,050.0
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ >2000 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LD ₅₀ 4688 mg/m ³ , Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Repeated exposure may cause skin dryness or cracking.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	No information available.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	No information available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause drowsiness or dizziness.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No information available.
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways.
<u>Inhalation</u>	
Inhalation	May cause respiratory system irritation. Vapours may cause drowsiness and dizziness. Vapours in high concentrations are narcotic.
<u>Ingestion</u>	
Ingestion	May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. Nausea, vomiting.
<u>Skin contact</u>	
Skin contact	Repeated exposure may cause skin dryness or cracking.
<u>Eye contact</u>	
Eye contact	May cause temporary eye irritation.

BUTANOL-norm

Acute toxicity - oral

URAD DD27 ND

Acute toxicity oral (LD₅₀ mg/kg) 790.0

Species Rat

Notes (oral LD₅₀) Harmful if swallowed. (Annex VI 1272/2008 CLP)
LD₅₀ 790 - 2292 mg/kg, Oral, Rat OECD 401

ATE oral (mg/kg) 790.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,430.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 3430 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 3,430.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 17.76

Species Rat

Notes (inhalation LC₅₀) LC₅₀ (4h) > 17.76 mg/l, Inhalation, Vapour, Rat (0 Death.) OECD 403

ATE inhalation (dusts/mists mg/l) 17.76

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness. Irritating to respiratory system. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Vapour may irritate respiratory system/lungs. Central nervous system depression. Vapours have a narcotic effect. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.

Ingestion Harmful if swallowed. Narcotic effect. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage. A single exposure may cause the following adverse effects: Corneal damage.

ISOBUTYL ACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,895.0

Species Rat

ATE oral (mg/kg) 4,895.0

Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 14.8

Species Rat

ATE inhalation (vapours mg/l) 14.8

Skin corrosion/irritation

Skin corrosion/irritation Irritating. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Rabbit

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity NOAEL > 8 mg/kg/day, Dermal, Mouse

Reproductive toxicity

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Reproductive toxicity - fertility Fertility - NOAEC 2.86 mg/l, Inhalation, Rat P

Reproductive toxicity - development Teratogenicity: - NOAEL: 2000 mg/kg/day, Oral, Mouse
Developmental toxicity: - NOAEL: 45 ppm, Inhalation, Rabbit

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 84 mg/kg/day, Oral, Rat

NAPHTHALENE

Toxicological effects Harmful if swallowed.

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 553.0

Species Mouse

ATE oral (mg/kg) 553.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2500 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LD₅₀ >0.4 mg/l, Inhalation, Rat OECD 403

Skin corrosion/irritation

Skin corrosion/irritation Prolonged and frequent contact may cause redness and irritation.

Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating.

Skin sensitisation

Skin sensitisation Not sensitising. Guinea pig

Germ cell mutagenicity

Genotoxicity - in vitro Inconclusive.

Carcinogenicity

Carcinogenicity Suspected of causing cancer.

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Symptoms following overexposure may include the following: Anaemia.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

URAD DD27 ND

Ecotoxicity Toxic to aquatic life with long lasting effects.

BUTANOL-norm

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

ISOBUTYL ACRYLATE

Ecotoxicity Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Toxicity Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 2 - 5 mg/l, Oncorhynchus mykiss (Rainbow trout)
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 3 - 10 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC₅₀, 72 hours: 1 - 3 mg/l, Pseudokirchneriella subcapitata
NOEC, 72 hours: 1 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 28 days: 0.44 mg/l, Oncorhynchus mykiss (Rainbow trout)
QSAR

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.77 mg/l, Daphnia magna
QSAR

BUTANOL-norm

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1376 mg/l, Pimephales promelas (Fat-head Minnow)
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1328 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC₅₀, 96 hours: 225 mg/l, Pseudokirchneriella subcapitata
OECD 201
IC₅₀, 72 hour: 4787 mg/l,
Chlorella vulgaris
OECD 201

Acute toxicity - microorganisms EC₁₀, 17 hour: 2476 mg/l,
Pseudomonas putida

URAD DD27 ND

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 day: 4787 mg/l, Daphnia magna
OECD 211

ISOBUTYL ACRYLATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 2.09 mg/l, Pimephales promelas (Fat-head Minnow)
LC₅₀, 96 hours: 5.2 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: 2.1 mg/l, Cyprinodon variegatus (Sheepshead minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 8.2 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 1.71 mg/l, Desmodemus subspicatus

Acute toxicity - microorganisms EC₅₀, 30 minutes: > 1000 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.19 mg/l, Daphnia magna

NAPHTHALENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 0.1 - 10 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 2.16 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 0.4 mg/l, Algae

Chronic aquatic toxicity

M factor (Chronic) 1

Chronic toxicity - fish early life stage NOEC, 40 days: 0.37 mg/l, Fish

Chronic toxicity - aquatic invertebrates NOEC, 125 days: 0.59 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Persistence and degradability Not readily biodegradable. Inherently biodegradable.

URAD DD27 ND

Biodegradation - Degradation 49.6%: 28 days
OECD 301F

BUTANOL-norm

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation 92 %: 15 days

ISOBUTYL ACRYLATE

Persistence and degradability The product is readily biodegradable.

Stability (hydrolysis) pH7 - Half-life : 16.5 years @ 25°C

Biodegradation - Degradation 80 - 90%: 28 days

NAPHTHALENE

Persistence and degradability Expected to be readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: < 4

BUTANOL-norm

Bioaccumulative potential BCF: 3.16,

Partition coefficient log Pow: 1.0 OECD 117

ISOBUTYL ACRYLATE

Bioaccumulative potential BCF: 17.3, Calculation method.

Partition coefficient log Pow: 2.38

NAPHTHALENE

Bioaccumulative potential BCF: 40 - 300, Fish

Partition coefficient log Pow: 3.3

12.4. Mobility in soil

Mobility Immiscible with water.

Ecological information on ingredients.

URAD DD27 ND

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Mobility	The product is insoluble in water and will spread on the water surface.
Surface tension	30 mN/m @ 20°C

BUTANOL-norm

Mobility	The product is soluble in water.
Henry's law constant	0.986 Pa m ³ /mol @ 25°C
Surface tension	69.9 mN/m @ 20°C OECD 115

ISOBUTYL ACRYLATE

Adsorption/desorption coefficient	Soil - Koc: 1.53 @ 20°C Calculation method.
Henry's law constant	21.89 Pa m ³ /mol @ 25°C Calculation method.
Surface tension	24.7 mN/m @ 25°C

NAPHTHALENE

Mobility	The product is insoluble in water.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

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

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

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

Other adverse effects No information available.

Ecological information on ingredients.

HYDROCARBONS, C10, AROMATICS, <1% NAPHTHALENE

Other adverse effects	Not determined.
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BUTANOL-norm

URAD DD27 ND

Other adverse effects No information required.

ISOBUTYL ACRYLATE

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Avoid discharge into drains or watercourses or onto the ground. Empty containers or liners may retain some product residues and hence be potentially hazardous. Do not puncture or incinerate, even when empty. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1866
UN No. (IMDG)	1866
UN No. (ICAO)	1866
UN No. (ADN)	1866

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	RESIN SOLUTION
Proper shipping name (IMDG)	RESIN SOLUTION
Proper shipping name (ICAO)	RESIN SOLUTION
Proper shipping name (ADN)	RESIN SOLUTION

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

URAD DD27 ND

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3Y
Hazard Identification Number (ADR/RID)	30
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	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). Commission Regulation (EU) No 2015/830 of 28 May 2015. This product may impact SEVESO storage regulations.
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Restrictions (Annex XVII Regulation 1907/2006)	CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3, 40
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Seveso Directive - Control of major accident hazards	P5c
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15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

URAD DD27 ND

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

14/06/2021

Version number

2.000

Supersedes date

20/11/2019

SDS number

59260

URAD DD27 ND

SDS status

Approved.

Hazard statements in full

H226 Flammable liquid and vapour.
H228 Flammable solid.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains ISOBUTYL ACRYLATE. May produce an allergic reaction.

Signature

Jacq Pattinson

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