



SAFETY DATA SHEET

URACRON CY455 XK1-51

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

1.1. Product identifier

Product name URACRON CY455 XK1-51

Product number 62372

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. 62372

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word

Danger

Hazard statements

EUH208 Contains METHYL METHACRYLATE. May produce an allergic reaction.
 H225 Highly flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.

URACRON CY455 XK1-51

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof electrical equipment.

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.

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.

Supplemental label information

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains

4-METHYLPENTAN-2-ONE, XYLENE (MIX OF ISOMERS)

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

4-METHYLPENTAN-2-ONE			10 - 30%
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			
XYLENE (MIX OF ISOMERS)			10 - 30%
CAS number: 1330-20-7	EC number: 905-588-0	REACH registration number: 01-2119488216-32-XXXX	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335 STOT RE 2 - H373 Asp. Tox. 1 - H304			

URACRON CY455 XK1-51

ETHYLBENZENE			5 - 10%
CAS number: 100-41-4	EC number: 202-849-4		
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332 STOT RE 2 - H373 Asp. Tox. 1 - H304 Aquatic Chronic 3 - H412			
OCTANOIC ACID			1 - 5%
CAS number: 124-07-2	EC number: 204-677-5	REACH registration number: 01-2119552491-41-XXXX	
Classification Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412			
METHYL METHACRYLATE			<1%
CAS number: 80-62-6	EC number: 201-297-1	REACH registration number: 01-2119452498-28-XXXX	
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 STOT SE 3 - H335			

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.

URACRON CY455 XK1-51

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 10 minutes. Get medical attention.
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

General information	May cause damage to organs through prolonged or repeated exposure.
Inhalation	May cause respiratory irritation. Symptoms following overexposure may include the following: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Vapours in high concentrations are narcotic.
Ingestion	May cause discomfort if swallowed.
Skin contact	Causes skin irritation. Prolonged and frequent contact may cause redness and irritation. The product contains a small amount of sensitising substance. May produce an allergic reaction.
Eye contact	Causes serious eye irritation.

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

Notes for the doctor	No specific recommendations. Treat symptomatically.
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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	Highly 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. When heated, vapours/gases hazardous to health may be formed. Use water spray to reduce vapours. 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 (CO ₂). Carbon monoxide (CO). Acrid smoke or fumes. Aldehydes. Acids - organic.

5.3. Advice for firefighters

URACRON CY455 XK1-51

Protective actions during firefighting	Evacuate area. No action shall be taken without appropriate training or involving any personal risk. Avoid breathing fire gases or vapours. Ventilate closed spaces before entering them. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. 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. Highly 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. 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	Highly 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	Highly 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. Use water spray to reduce vapours. 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

URACRON CY455 XK1-51

Usage precautions

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

Highly 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

Highly 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

4-METHYLPENTAN-2-ONE

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, BMGV

XYLENE (MIX OF ISOMERS)

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, BMGV

ETHYLBENZENE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³

Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³

Sk

METHYL METHACRYLATE

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

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

BMGV = Biological monitoring guidance value.

URACRON CY455 XK1-51**4-METHYLPENTAN-2-ONE (CAS: 108-10-1)****DNEL**

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

PNEC

- Fresh water; 0.6 mg/l
 - marine water; 0.06 mg/l
 - Soil; 1.3 mg/kg
 - Sediment (Freshwater); 8.27 mg/kg
 - Sediment (Marinewater); 0.83
 - Intermittent release; 1.5

XYLENE (MIX OF ISOMERS) (CAS: 1330-20-7)**DNEL**

Workers - Inhalation; Short term systemic effects: 289 mg/m³
 Workers - Inhalation; Short term local effects: 289 mg/m³
 Workers - Dermal; Long term systemic effects: 180 mg/kg/day
 Workers - Inhalation; Long term systemic effects: 77 mg/m³
 Workers - Inhalation; Long term local effects: 77 mg/m³
 General population - Inhalation; Short term systemic effects: 174 mg/m³
 General population - Inhalation; Short term local effects: 174 mg/m³
 General population - Dermal; Long term systemic effects: 108 mg/kg/day
 General population - Inhalation; Long term systemic effects: 14.8 mg/m³
 General population - Oral; Long term systemic effects: 1.6 mg/kg/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 (Marinewater); 12.46 mg/kg
 - Soil; 2.31 mg/kg

ETHYLBENZENE (CAS: 100-41-4)**DNEL**

Workers - Inhalation; Long term systemic effects: 77 mg/m³
 Workers - Inhalation; Short term local effects: 293 mg/m³
 Workers - Dermal; Long term systemic effects: 180 mg/kg/day
 General population - Inhalation; Long term systemic effects: 15 mg/m³
 General population - Oral; Long term systemic effects: 1.6 mg/kg/day

PNEC

- Fresh water; 0.1 mg/l
 - marine water; 0.01 mg/l
 - Intermittent release; 0.1 mg/l
 - STP; 9.6 mg/l
 - Sediment (Freshwater); 13.7 mg/kg
 - Sediment (Marinewater); 1.37 mg/kg
 - Soil; 2.68 mg/kg

URACRON CY455 XK1-51

OCTANOIC ACID (CAS: 124-07-2)

Ingredient comments No exposure limits known for ingredient(s).

METHYL METHACRYLATE (CAS: 80-62-6)

Ingredient comments WEL = Workplace Exposure Limits

DNEL

Workers - Inhalation; Long term local effects: 208 mg/m³
 Workers - Dermal; Long term local effects: 1.5 mg/cm²
 Workers - Inhalation; Long term systemic effects: 208 mg/m³
 Workers - Dermal; Long term systemic effects: 13.67 mg/kg/day
 Workers - Dermal; Short term local effects: 1.5 mg/cm²
 Consumer - Inhalation; Long term local effects: 105 mg/m³
 Consumer - Dermal; Long term local effects: 1.5 mg/cm²
 Consumer - Inhalation; Long term systemic effects: 74.3 mg/m³
 Consumer - Dermal; Long term systemic effects: 8.2 mg/kg/day
 Consumer - Dermal; Short term local effects: 1.5 mg/cm²

PNEC

- Fresh water; 0.94 mg/l
 - marine water; 0.094 mg/l
 - Soil; 1.47 mg/kg
 - Sediment; 5.74 mg/kg
 - STP; 10 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. Avoid inhalation of vapours and contact with skin and eyes. Use explosion-proof electrical equipment. 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.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. 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. The selected gloves should have a breakthrough time of at least 4 - 8 hours. Frequent changes are recommended.

It is recommended that gloves are made of the following material:

Viton rubber (fluoro rubber). Protective gloves should have a minimum thickness of 0.7 mm.

Polyvinyl alcohol (PVA). Protective gloves should have a minimum thickness of 0.5 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.

URACRON CY455 XK1-51

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	116 - 145°C @ 760 mm Hg
Flash point	19°C Closed cup.
Evaporation rate	0.76 (butyl acetate = 1)
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	~ 0.98
Bulk density	0.98 kg/m ³
Solubility(ies)	Immiscible with water.
Partition coefficient	log Pow: 3.1
Auto-ignition temperature	500°C

URACRON CY455 XK1-51

Decomposition Temperature	No information available.
Viscosity	6000 - 8500 mPa s @ 20°C > 6122 cSt @ 20°C > 20.5 cSt @ 40°C
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	No information available.
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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	Highly 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). Acid 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 LD₅₀)	Based on available data the classification criteria are not met.
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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)	5,365.85
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Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
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URACRON CY455 XK1-51

ATE inhalation (gases ppm) 21,428.57

ATE inhalation (vapours mg/l) 23.6

ATE inhalation (dusts/mists mg/l) 7.14

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

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

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.

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

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

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

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

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Target organs Respiratory system, lungs

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

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

Inhalation

May cause respiratory irritation.

Symptoms following overexposure may include the following: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. 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

Causes skin irritation. Prolonged and frequent contact may cause redness and irritation. The product contains a small amount of sensitising substance. May produce an allergic reaction.

Eye contact

Causes serious eye irritation.

Acute and chronic health hazards

May cause damage to organs through prolonged or repeated exposure.

URACRON CY455 XK1-51

Toxicological information on ingredients.4-METHYLPENTAN-2-ONEAcute toxicity - inhalation

ATE inhalation (gases ppm)	4,500.0
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ATE inhalation (vapours mg/l)	11.0
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ATE inhalation (dusts/mists mg/l)	1.5
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Skin corrosion/irritation

Animal data	Not irritating.
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	Not sensitising.
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Germ cell mutagenicity

Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.
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Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
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IARC carcinogenicity	IARC Group 2B Possibly carcinogenic to humans.
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Reproductive toxicity

Reproductive toxicity - fertility	This substance has no evidence of toxicity to reproduction.
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Specific target organ toxicity - single exposure

STOT - single exposure	No information available.
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Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 250 mg/kg, Inhalation, Rat
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Aspiration hazard

Aspiration hazard	No information available.
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Inhalation	Harmful if inhaled. May cause respiratory irritation.
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Ingestion	May cause stomach pain or vomiting.
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Skin contact	Prolonged contact may cause dryness of the skin.
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Eye contact	Irritating to eyes.
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XYLENE (MIX OF ISOMERS)

URACRON CY455 XK1-51

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 4300 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) Harmful in contact with skin.
LD₅₀ 1100 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 1,100.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Harmful if inhaled.

ATE inhalation (vapours mg/l) 11.0

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.
Primary dermal irritation index: 2.21 Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - Mouse: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro DNA damage and/or repair: Negative.

Genotoxicity - in vivo Chromosome aberration: Negative.

Carcinogenicity

Carcinogenicity NOAEL > 500 mg/kg/day, Oral, Rat

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEC 500 ppm, Inhalation, Vapour, Rat P

Reproductive toxicity - development Developmental toxicity: - NOAEC: 100 ppm, Inhalation, Rat

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

Aspiration hazard

Aspiration hazard Aspiration hazard if swallowed. May be fatal if swallowed and enters airways.

URACRON CY455 XK1-51

Inhalation	Harmful by inhalation. Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.
Ingestion	May be fatal if swallowed and enters airways. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
Skin contact	Harmful in contact with skin. Causes skin irritation. Repeated exposure may cause skin dryness or cracking. Product has a defatting effect on skin.
Eye contact	Causes serious eye irritation.
Acute and chronic health hazards	May cause damage to organs through prolonged or repeated exposure.

ETHYLBENZENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,500.0

Species Rat

ATE oral (mg/kg) 3,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 17.2

Species Rat

ATE inhalation (vapours mg/l) 17.2

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

OCTANOIC ACID

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,000.0

Species Rat

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Causes severe burns.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

URACRON CY455 XK1-51

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 No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation May cause respiratory system irritation.

Ingestion May cause discomfort if swallowed. Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

Skin contact Causes burns.

Eye contact Causes severe burns. May cause chemical eye burns.

METHYL METHACRYLATE**Acute toxicity - oral**

Notes (oral LD₅₀) LD₅₀ > 5000 mg/kg, Oral,

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Notes (dermal LD₅₀) LD₅₀ > 5000 mg/kg, Dermal,

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 29.8

Notes (inhalation LC₅₀) LC₅₀ (4h) 29.8 mg/l, Inhalation, Vapour,

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

URACRON CY455 XK1-51

Skin sensitisation May cause an allergic skin reaction. Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.

Genotoxicity - in vivo No information available.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Reproductive toxicity - development Embryotoxicity:; Fetotoxicity:; Teratogenicity: - NOAEC: 9000 ppm, , Mouse
Embryotoxicity:; Fetotoxicity:; Teratogenicity: - NOAEC: > 2028 ppm, , Rat

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL (104 w) >2000 ppm, Oral, Rat
NOAEC (104 w) 100 ppm, Inhalation, Rat
NOAEC (14 w) 1000 ppm, Inhalation, Mouse

Target organs Lungs Heart Liver Kidneys

Aspiration hazard

Aspiration hazard Not applicable.

Inhalation May cause respiratory irritation. Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Dizziness. Drowsiness. Severe irritation of nose and throat.

Ingestion The product is considered to be a low hazard under normal conditions of use. The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

Skin contact Causes skin irritation. May cause an allergic skin reaction. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Eye contact May cause temporary eye irritation.

Target organs Lungs Kidneys Liver Heart

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

4-METHYLPENTAN-2-ONE

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

URACRON CY455 XK1-51**XYLENE (MIX OF ISOMERS)**

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

ETHYLBENZENE

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

OCTANOIC ACID

Ecotoxicity Harmful to aquatic life with long lasting effects.

METHYL METHACRYLATE

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 There are no data on the ecotoxicity of this product.

Ecological information on ingredients.**4-METHYLPENTAN-2-ONE**

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 179 mg/l, Brachydanio rerio (Zebra Fish)
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 200 , Daphnia magna
OECD 202

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 30 mg/l, Daphnia magna

XYLENE (MIX OF ISOMERS)**Acute aquatic toxicity**

Acute toxicity - fish LC₅₀, 96 hour: 2.6 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hour: 1 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 73 hour: 2.2 mg/l, Pseudokirchneriella subcapitata

Acute toxicity - microorganisms NOEC, 3 hour: >157 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 56 day: > 1.3 mg/l, Oncorhynchus mykiss (Rainbow trout)

URACRON CY455 XK1-51

Chronic toxicity - aquatic invertebrates NOEC, 7 day: 1.17 mg/l, Freshwater invertebrates
Ceriodaphnia dubia

ETHYLBENZENE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 4.2 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1.8-2.4 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 5.4 mg/l, Pseudokirchneriella subcapitata

OCTANOIC ACID

Toxicity Harmful to aquatic life.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 22 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 20 mg/l, Daphnia magna

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.2 mg/l, Daphnia magna

METHYL METHACRYLATE

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 130 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 69 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >110 mg/l, Pseudokirchneriella subcapitata
NOEC, 72 hours: 49 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 35 days: 9.4 mg/l, Brachydanio rerio (Zebra Fish)

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 37 mg/l, Daphnia magna

12.2. Persistence and degradability

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

Ecological information on ingredients.

4-METHYLPENTAN-2-ONE

Persistence and degradability The substance is readily biodegradable.

URACRON CY455 XK1-51

Biodegradation - Degradation 83 %: 28 days
OECD 301F

XYLENE (MIX OF ISOMERS)

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation 87.8%: 28 day
OECD 301F

ETHYLBENZENE

Persistence and degradability The product is readily biodegradable.

OCTANOIC ACID

Persistence and degradability The product is readily biodegradable.

METHYL METHACRYLATE

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation (DOC Rem) > 95%: 28 day

Chemical oxygen demand 88 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 3.1

Ecological information on ingredients.**4-METHYLPENTAN-2-ONE**

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient : 1.38

XYLENE (MIX OF ISOMERS)

Bioaccumulative potential The product is not bioaccumulating.
BCF: 5.4 - 25.9, Oncorhynchus mykiss (Rainbow trout)

Partition coefficient log Pow: 2.77 - 3.2

ETHYLBENZENE

Partition coefficient : 3.5

OCTANOIC ACID

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 2.9

URACRON CY455 XK1-51**METHYL METHACRYLATE**

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient : 1.38

12.4. Mobility in soil

Mobility Immiscible with water.

Ecological information on ingredients.**4-METHYLPENTAN-2-ONE**

Mobility The product has poor water-solubility.

XYLENE (MIX OF ISOMERS)

Mobility Miscible with water.

Adsorption/desorption coefficient Soil - Log Koc: 2.73 @ 20 -25°C

Henry's law constant 623 - 665 Pa m³/mol @ 25°C

Surface tension 29.76 mN/m @ 25°C

ETHYLBENZENE

Mobility The product is insoluble in water.

OCTANOIC ACID

Mobility The product is insoluble in water.

METHYL METHACRYLATE

Mobility The product has poor water-solubility.

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.**4-METHYLPENTAN-2-ONE**

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

XYLENE (MIX OF ISOMERS)

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

OCTANOIC ACID

URACRON CY455 XK1-51**Results of PBT and vPvB assessment**

This substance is not classified as PBT or vPvB according to current EU criteria.

METHYL METHACRYLATE**Results of PBT and vPvB assessment**

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects**Other adverse effects** No information available.**Ecological information on ingredients.****4-METHYLPENTAN-2-ONE****Other adverse effects** None known.**XYLENE (MIX OF ISOMERS)****Other adverse effects** Not determined.**OCTANOIC ACID****Other adverse effects** Not determined.**METHYL METHACRYLATE****Other adverse effects** Not determined.**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. Vapour from residual product may create a highly flammable or explosive atmosphere inside the container. 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

URACRON CY455 XK1-51

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**

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

ADN packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-E, S-E

ADR transport category 2

Emergency Action Code •3Y

Hazard Identification Number 33
(ADR/RID)

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 Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

URACRON CY455 XK1-51

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.

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

Seveso Directive - Control of P5c
major accident hazards

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

URACRON CY455 XK1-51

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

This is the first issue.

Revision date

15/06/2021

Version number

1.000

SDS number

62372

SDS status

Approved.

URACRON CY455 XK1-51

Hazard statements in full

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs (Hearing organs) through prolonged or repeated exposure.
H373 May cause damage to organs (Central nervous system, Liver, Kidneys) through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains METHYL METHACRYLATE. May produce an allergic reaction.

Signature

Jacq Pattinson

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.