SAFETY DATA SHEET

MM2000 BeroMix 2000 Series White

Section 1. Identification

Product identifier : MM2000 BeroMix 2000 Series White

Product type : Liquid.

Recommended use of the chemical and restrictions on use

Identified uses
Use in coatings - Topcoat

Restrictions on use
Not applicable.

Supplier's details : Valspar b.v.
Zuiveringweg 89
8243 PE Lelystad
The Netherlands
tel: +31 (0)320 292200
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Section 2. Hazard identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
SKIN SENSITISATION - Category 1
REPRODUCTIVE TOXICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure. (hearing organs)
Harmful to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazard identification

Prevention : Obtain, read and follow all safety instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapour. Wash hands thoroughly after handling. Do not touch eyes. Contaminated work clothing should not be allowed out of the workplace.

Response : IF exposed or concerned, get medical advice. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical help. If skin irritation occurs: Get medical help. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help. Get medical help if you feel unwell.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	Identifiers
n-butyl acetate	≥10 - ≤25	CAS: 123-86-4 EC: 204-658-1
xylene	≤11	CAS: 1330-20-7 EC: 215-535-7
Solvent naphtha (petroleum), light arom.	≤8.8	CAS: 64742-95-6 EC: 265-199-0
2-methoxy-1-methylethyl acetate	≤5	CAS: 108-65-6 EC: 203-603-9
ethylbenzene	≤3	CAS: 100-41-4 EC: 202-849-4
2-butoxyethyl acetate	≤3	CAS: 112-07-2 EC: 203-933-3
trimethylbenzene	≤2.4	CAS: 25551-13-7 EC: 247-099-9
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	≤0.66	CAS: 41556-26-7 EC: 255-437-1
toluene	≤0.3	CAS: 108-88-3 EC: 203-625-9
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	≤0.22	CAS: 82919-37-7 EC: 280-060-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Section 8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: chemical splash goggles and/or face shield.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Recommended EN 374 polyvinyl alcohol (PVA) >= 0.7 mm
< 1 hour (breakthrough time): Conditionally suitable materials for protective gloves; EN 374: Nitrile rubber - NBR (>= 0.35 mm). Only suitable as splash protection. Only suitable for brief exposure. In the event of contamination, change protective gloves immediately.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Recommended: Cotton or cotton/synthetic overalls or coveralls are normally suitable.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: EN 405:2001 + A1:2009 organic vapour (Type A) and particulate filter FFA2P3 R D

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Colour : White.

Odour : Pungent, fruity.

Odour threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not applicable.

Boiling point or initial boiling point and boiling range : >100°C (>212°F)

Flash point : Closed cup: 30°C (86°F)

Evaporation rate : 1 (butyl acetate = 1)

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Lower: 0.8%
Upper: 7.6%

Vapour pressure : 1.3 kPa (10 mm Hg)

Relative vapour density : 4 [Air = 1]

Relative density : 1.196

Density : 1.196 g/cm³

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : Not applicable.

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : 415°C (779°F)

Decomposition temperature : Not applicable.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): >20.5 mm^2/s (>20.5 cSt)

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.

Section 10. Stability and reactivity

Incompatible materials : Reactive or incompatible with the following materials:
oxidising materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
n-butyl acetate	**Rabbit - Dermal - LD50** >14112 mg/kg OECD [Acute Dermal Toxicity] **Rat - Oral - LD50** 10760 mg/kg OECD [Acute Oral toxicity - Acute Toxic Class Method] **Rat - Inhalation - LC50 Vapour** >21.1 mg/l [4 hours] OECD [Acute Inhalation Toxicity] **Rat - Inhalation - LC50 Gas.** 390 ppm [4 hours] Toxic effects: Behavioral - Changes in motor activity (specific assay) Lung, Thorax, or Respiration - Acute pulmonary edema Blood - Hemorrhage
xylene	**Rabbit - Dermal - LD50** 12126 mg/kg **Rat - Oral - LD50** 4300 mg/kg **Rat - Male - Inhalation - LC50 Vapour** 29000 mg/l [4 hours] **Rat - Inhalation - LC50 Gas.** 5000 ppm [4 hours]
Solvent naphtha (petroleum), light arom.	**Rat - Oral - LD50** 3592 mg/kg OECD [Acute Oral Toxicity] **Rabbit - Dermal - LD50** >3160 mg/kg OECD [Acute Dermal Toxicity] **Rat - Inhalation - LC50 Vapour** 6193 mg/m³ [4 hours] OECD [Acute Inhalation Toxicity]
2-methoxy-1-methylethyl acetate	**Rat - Dermal - LD50** >5000 mg/kg **Rat - Oral - LD50** 8532 mg/kg **Rabbit - Dermal - LD50** >5 g/kg
ethylbenzene	**Rabbit - Dermal - LD50** 12126 mg/kg **Rat - Oral - LD50** 3500 mg/kg Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes **Rat - Inhalation - LC50 Vapour** 6350 ppm [4 hours]
2-butoxyethyl acetate	**Rat - Oral - LD50** 1880 mg/kg **Rabbit - Dermal - LD50** 1500 mg/kg

Section 11. Toxicological information

	Toxic effects: Kidney, Ureter, and Bladder - Hematuria Kidney, Ureter, and Bladder - Other changes in urine composition Blood - Normocytic anemia
trimethylbenzene	**Rat - Oral - LD50** 8970 mg/kg
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	**Rat - Oral - LD50** >3230 mg/kg
toluene	**Rabbit - Dermal - LD50** >5000 mg/kg **Rat - Oral - LD50** 636 mg/kg **Rat - Inhalation - LC50 Vapour** 28.1 mg/l [4 hours]
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	**Rat - Oral - LD50** >3230 mg/kg

Conclusion/Summary[Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result
n-butyl acetate	**Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
xylene	**Rat - Skin - Mild irritant** Duration of treatment/exposure: 8 hours Amount/concentration applied: 60 uL **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 100 %
ethylbenzene	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 15 mg
2-butoxyethyl acetate	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg
trimethylbenzene	**Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
toluene	**Pig - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 250 uL **Rabbit - Skin - Mild irritant** Amount/concentration applied: 435 mg **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 500 mg

Conclusion/Summary[Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result

Section 11. Toxicological information

n-butyl acetate	**Rabbit - Eyes - Moderate irritant** Amount/concentration applied: 100 mg
xylene	**Rabbit - Eyes - Mild irritant** Amount/concentration applied: 87 mg **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 5 mg
Solvent naphtha (petroleum), light arom.	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 uL
ethylbenzene	**Rabbit - Eyes - Severe irritant** Amount/concentration applied: 500 mg
2-butoxyethyl acetate	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
trimethylbenzene	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
toluene	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 0.5 minutes Amount/concentration applied: 100 mg **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 870 ug **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.1 Ml

Conclusion/Summary[Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary[Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary[Product] : Not available.

Respiratory

Conclusion/Summary[Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary[Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary[Product] : Not available.

Section 11. Toxicological information

Reproductive toxicity

Not available.

Conclusion/Summary[Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
n-butyl acetate	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
xylene	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
Solvent naphtha (petroleum), light arom.	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
2-methoxy-1-methylethyl acetate	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
toluene	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
xylene	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
ethylbenzene	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (hearing organs) - Category 2
toluene	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
trimethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Section 11. Toxicological information

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary[Product] : Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)

Section 11. Toxicological information

MM2000 BeroMix 2000 Series White	N/A	9359.5	47290.7	203.2	N/A
n-butyl acetate	10760	N/A	N/A	N/A	N/A
xylene	N/A	1100	5000	29000	N/A
2-methoxy-1-methylethyl acetate	8532	N/A	N/A	N/A	N/A
ethylbenzene	N/A	12126	N/A	11	N/A
2-butoxyethyl acetate	N/A	1500	N/A	11	N/A
trimethylbenzene	8970	N/A	N/A	11	N/A
toluene	N/A	N/A	N/A	28.1	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
n-butyl acetate	**Acute - NOEC** Algae 200 mg/l [72 hours] **Acute - EC50** OECD 201 [Alga, Growth Inhibition Test] Algae - *Selenastrum capricornutum* 397 mg/l [72 hours] **Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 31 to 32 days; Size: 21.6 mm; Weight: 0.175 g 18 mg/l [96 hours] Effect: Mortality **Acute - LC50 - Marine water** Crustaceans - Brine shrimp - *Artemia salina* 32 mg/l [48 hours] Effect: Mortality
xylene	**Acute - EC50** Algae 1 to 10 mg/l [72 hours] **Acute - LC50 - Marine water** Crustaceans - Daggerblade grass shrimp - *Palaemon pugio* 8500 µg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 31 days; Size: 18.4 mm; Weight: 0.077 g 13.4 mg/l [96 hours] Effect: Mortality
Solvent naphtha (petroleum), light arom.	**Acute - LC50** Fish, Acute Toxicity Test Fish - *Oncorhynchus mykiss* 9.2 mg/l [96 hours] **Acute - EC50** Alga, Growth Inhibition Test Algae - *Pseudokirchneriella subcapitata* 2.9 mg/l [72 hours] **Acute - EC50** Daphnia sp. Acute Immobilization Test and Reproduction Test Daphnia - *Daphnia magna* 3.2 mg/l [48 hours] **Acute - NOEC** Algae - *Pseudokirchneriella subcapitata* >1 mg/l [72 hours]
2-methoxy-1-methylethyl acetate	**Acute - LC50** Fish - *Oncorhynchus mykiss* 134 mg/l [96 hours]

Section 12. Ecological information

	Acute - EC50 Daphnia - Daphnia - *Daphnia magna* 408 mg/l [48 hours] **Acute - EC50** Algae - *Pseudokirchnerella subcapitata* >1000 mg/l [96 hours]
ethylbenzene	**Acute - LC50 - Fresh water** Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* 4200 µg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Daphnia - Water flea - *Daphnia magna* - Neonate Age: ≤24 hours 2.93 mg/l [48 hours] Effect: Intoxication **Acute - EC50 - Fresh water** Algae - Green algae - *Raphidocelis subcapitata* 3600 µg/l [96 hours] Effect: Population
2-butoxyethyl acetate	**Acute - EC50** Daphnia - *Daphnia magna* 37 mg/l [48 hours] **Acute - LC50** Fish - *Pimephales promelas* 22 mg/l [96 hours] **Acute - EC50** Algae - *Pseudokirchneriella subcapitata* 1570 mg/l [72 hours]
trimethylbenzene	**Acute - LC50 - Marine water** Crustaceans - Daggerblade grass shrimp - *Palaemon pugio* 5600 µg/l [48 hours] Effect: Mortality
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	**Acute - LC50** Fish 0.9 mg/l [96 hours] **Acute - NOEC** Daphnia 6.3 mg/l [21 days] **Acute - EC50** Algae 0.22 mg/l [72 hours]
toluene	**Acute - LC50** Fish - *Oncorhynchus kisutch* 5.5 mg/l [96 hours] **Acute - EC50** Daphnia - *Daphnia magna* 3.8 mg/l [48 hours] **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: ≤24 hours 1 mg/l [21 days] Effect: Mortality **Acute - EC50 - Fresh water** Algae - Green algae - *Raphidocelis subcapitata* 12.5 mg/l [72 hours] Effect: Growth
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	**Acute - LC50** Fish 0.9 mg/l [96 hours] **Acute - EC50**

Section 12. Ecological information

Algae
0.22 mg/l [72 hours]
Acute - NOEC
Daphnia
6.3 mg/l [21 days]

Conclusion/Summary[Product] : Not available.

Persistence and degradability

Product/ingredient name	Result
n-butyl acetate	OECD [Ready Biodegradability - Closed Bottle Test] >80% [5 days]
Solvent naphtha (petroleum), light arom.	78% [28 days] - Readily
2-methoxy-1-methylethyl acetate	OECD [Ready Biodegradability - Manometric Respirometry Test] 83% [28 days] OECD [Inherent Biodegradability: Zahn-Wellens/EMPA Test] 100% [28 days]

Conclusion/Summary[Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-butyl acetate	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
2-butoxyethyl acetate	-	90.4%; 28 day(s)	-
toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
n-butyl acetate	2.3	-	Low
xylene	3.12	8.1 to 25.9	Low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	High
2-methoxy-1-methylethyl acetate	1.2	-	Low
ethylbenzene	3.6	-	Low
2-butoxyethyl acetate	1.51	-	Low
trimethylbenzene	3.4 to 3.8	-	Low
toluene	2.73	90	Low

Mobility in soil

Soil/water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT (n-butyl acetate, xylene)	PAINT (n-butyl acetate, xylene)	Paint (n-butyl acetate, xylene)
Transport hazard class(es)	3 	3 	3 
Packing group	III	III	III
Environmental hazards	No.	No.	No.

Additional information

IMDG : **Emergency schedules** 3-05

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Section 15. Regulatory information

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: At least one component is not listed.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : Not determined.

Section 16. Other information

History

Date of printing : 4/14/2025

Date of issue/Date of revision : 4/11/2025

Date of previous issue : 4/11/2025

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
REPRODUCTIVE TOXICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	Calculation method
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.