AkzoNobel

# SAFETY DATA SHEET

ISOMAP P21 BASE GREY RAL 7015

## Section 1. Identification

**GHS product identifier** : ISOMAP P21 BASE GREY RAL 7015

**SDS code** : 12021000B

**Relevant identified uses of the substance or mixture and uses advised against**

| Identified uses |
|---|
| Paint. Professional use Industrial use |

| Uses advised against |
|---|
| All other uses |

**Product use** : Solvent borne primer

**Supplier's details**

MAPAERO SAS
10, Avenue de la Rijole CS30098
09103 PAMIERS Cedex
France

**e-mail address of person responsible for this SDS** : PSRA_PAMIERS@akzonobel.com

**Emergency telephone number (with hours of operation)** : +33 (0)5 34 01 34 01
+33 (0)5 61 60 23 30

## 2. Hazards identification

**GHS Classification** : FLAMMABLE LIQUIDS - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

**GHS label elements**

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : Highly flammable liquid and vapor.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.

**Precautionary statements**

# 2. Hazards identification

**General** : Not applicable.

**Prevention** : Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks and hot surfaces. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid release to the environment. Avoid breathing vapor.

**Response** : Collect spillage. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. 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 advice or attention.

**Storage** : Store in a well-ventilated place. Keep container tightly closed. Keep cool.

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

# 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name | % | CAS number | Official Gazette notice reference number | |
|---|---|---|---|---|
| | | | CSCL | ISHL |
| butanone | ≥25 - ≤50 | 78-93-3 | 2-542 | 2-542 |
| trizinc bis(orthophosphate) | ≤10 | 7779-90-0 | 1-1181; 1-526 | (1)-1181; (1)-526 |
| titanium dioxide | ≤10 | 13463-67-7 | 1-558; 5-5225 | 2-(3)-509 |
| Barite (Ba(SO4)) | ≤5.0 | 13462-86-7 | 1-89 | Not available. |
| Reaction mass of ethylbenzene and xylene | 3.1 | - | Not available. | Not available. |
| cyclohexanone | ≤3.0 | 108-94-1 | 3-2376 | Not available. |
| xylene | 2.5 | 1330-20-7 | 3-3; 3-60 | (3)-3; (3)-60 |
| cyclohexanone | ≤3.0 | 108-94-1 | Not available. | Not available. |
| carbon black, respirable powder | ≤1.0 | 1333-86-4 | 5-3328; 5-5222 | Not available. |
| zinc oxide | ≤0.30 | 1314-13-2 | 1-561 | (1)-561 |
| Fatty acids, C14-18 and C16-18-unsatd., maleated | ≤0.30 | 85711-46-2 | Not available. | Not available. |
| maleic anhydride | 0.0010 | 108-31-6 | 2-1101 | (2)-1101 |

# 4. First aid measures

**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.

**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.

# 4. First aid measures

**Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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**

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

**Skin contact** : May cause an allergic skin reaction.

**Eye contact** : Causes serious eye irritation.

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

**Over-exposure signs/symptoms**

**Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

**Skin contact** : Adverse symptoms may include the following:
irritation
redness

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

**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.

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

# 5. Fire-fighting measures

**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** : Highly flammable liquid and vapor. 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. This material is toxic 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.

## 5. Fire-fighting measures

**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.

## 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized 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".

**Environmental precautions** : Avoid dispersal of spilled 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. Collect spillage.

**Methods and materials 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. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry 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 release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 7. Handling and storage

**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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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.

# 7. Handling and storage

**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** : 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# 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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Occupational exposure limits**

| Ingredient name | Exposure limits |
|---|---|
| butanone | **Japan Society for Occupational Health (Japan, 5/2019).**<br>OEL-M: 590 mg/m³ 8 hours.<br>OEL-M: 200 ppm 8 hours.<br>**ISHL (Japan, 10/2019).**<br>TWA: 200 ppm 8 hours. |
| Reaction mass of ethylbenzene and xylene | **ISHL (Japan, 10/2019).**<br>TWA: 50 ppm 8 hours.<br>**Japan Society for Occupational Health (Japan, 5/2019).**<br>OEL-M: 50 ppm 8 hours.<br>OEL-M: 217 mg/m³ 8 hours. |
| cyclohexanone | **Japan Society for Occupational Health (Japan, 5/2019).**<br>OEL-M: 25 ppm 8 hours.<br>OEL-M: 100 mg/m³ 8 hours.<br>**ISHL (Japan, 10/2019).**<br>TWA: 20 ppm 8 hours. |
| xylene | **ISHL (Japan, 10/2019).**<br>TWA: 50 ppm 8 hours.<br>**Japan Society for Occupational Health (Japan, 5/2019).**<br>OEL-M: 50 ppm 8 hours.<br>OEL-M: 217 mg/m³ 8 hours. |
| cyclohexanone | **Japan Society for Occupational Health (Japan, 5/2019).**<br>OEL-M: 100 mg/m³ 8 hours.<br>OEL-M: 25 ppm 8 hours.<br>**ISHL (Japan, 10/2019).**<br>TWA: 20 ppm 8 hours. |
| maleic anhydride | **Japan Society for Occupational Health (Japan, 5/2019). Skin sensitizer. Inhalation sensitizer.**<br>OEL-C: 0.8 mg/m³ |

# 8. Exposure controls/personal protection

| | |
|---|---|
| | OEL-C: 0.2 ppm<br>OEL-M: 0.4 mg/m³ 8 hours.<br>OEL-M: 0.1 ppm 8 hours. |

**Individual protection measures**

**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.

**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.

**Eye 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.

**Skin 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.

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.

# 9. Physical and chemical properties

**Appearance**

**Physical state** : Liquid.

**Color** : Gray.

**Odor** : Characteristic.

**pH** : Not available.

**Melting point/freezing point** : Not available.

**Boiling point, initial boiling point, and boiling range** : Not available.

**Flash point** : Closed cup: 18°C

**Upper/lower flammability or explosive limits** : Greatest known range: Lower: 1.8% Upper: 11.5% (butanone)

**Vapor pressure** : Not available.

**Vapor density** : Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate). Weighted average: 2.96 (Air = 1)

**Density** : 1.122 g/cm³

**Solubility(ies)** : Insoluble in the following materials: cold water.

**Partition coefficient: n-octanol/water** : Not available.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Viscosity** : Kinematic (room temperature): 4.72 $cm^2/s$
Kinematic (40°C): 1.01 $cm^2/s$

## 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 pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials

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

## 11. Toxicological information

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| butanone | LC50 Inhalation Vapor | Mouse | 32 g/m³ | 4 hours |
| | LC50 Inhalation Vapor | Rat | 23500 mg/m³ | 8 hours |
| | LD50 Dermal | Rabbit | 6480 mg/kg | - |
| | LD50 Intraperitoneal | Guinea pig | 2 g/kg | - |
| | LD50 Intraperitoneal | Mouse | 616 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 607 mg/kg | - |
| | LD50 Oral | Mouse | 3000 mg/kg | - |
| | LD50 Oral | Rat | 2737 mg/kg | - |
| trizinc bis(orthophosphate) | LD50 Intraperitoneal | Mouse | 552 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 551 mg/kg | - |
| Reaction mass of ethylbenzene and xylene | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| cyclohexanone | LC50 Inhalation Gas. | Rat | 8000 ppm | 4 hours |
| | LD50 Dermal | Rabbit | 1 mL/kg | - |
| | LD50 Intraperitoneal | Guinea pig | 930 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1230 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1230 mg/kg | - |
| | LD50 Intraperitoneal | Rabbit | 1540 mg/kg | - |
| | LD50 Intraperitoneal | Rabbit | 1540 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 1130 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 1130 mg/kg | - |
| | LD50 Oral | Mouse | 1400 mg/kg | - |
| | LD50 Oral | Rat | 1800 mg/kg | - |
| | LD50 Oral | Rat | 1620 uL/kg | - |
| | LD50 Subcutaneous | Rat | 2170 mg/kg | - |
| xylene | LC50 Inhalation Gas. | Rat | 6700 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 6670 ppm | 4 hours |
| | LD50 Intraperitoneal | Mouse | 1548 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1548 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 2459 mg/kg | - |
| | LD50 Oral | Mouse | 2119 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Subcutaneous | Rat | 1700 mg/kg | - |
| cyclohexanone | LC50 Inhalation Gas. | Rat | 8000 ppm | 4 hours |
| | LD50 Dermal | Rabbit | 1 mL/kg | - |
| | LD50 Intraperitoneal | Guinea pig | 930 mg/kg | - |

# 11. Toxicological information

| | | | | |
|---|---|---|---|---|
| | LD50 Intraperitoneal | Mouse | 1230 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1230 mg/kg | - |
| | LD50 Intraperitoneal | Rabbit | 1540 mg/kg | - |
| | LD50 Intraperitoneal | Rabbit | 1540 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 1130 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 1130 mg/kg | - |
| | LD50 Oral | Mouse | 1400 mg/kg | - |
| | LD50 Oral | Rat | 1800 mg/kg | - |
| | LD50 Oral | Rat | 1620 uL/kg | - |
| | LD50 Subcutaneous | Rat | 2170 mg/kg | - |
| carbon black, respirable powder | LD50 Oral | Rat | >15400 mg/kg | - |
| zinc oxide | LD50 Intraperitoneal | Rat | 240 mg/kg | - |
| | LD50 Oral | Mouse | 7950 mg/kg | - |
| maleic anhydride | LD50 Dermal | Guinea pig | >20 g/kg | - |
| | LD50 Dermal | Rabbit | 2620 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 97 mg/kg | - |
| | LD50 Oral | Guinea pig | 390 mg/kg | - |
| | LD50 Oral | Mouse | 465 mg/kg | - |
| | LD50 Oral | Rabbit | 875 mg/kg | - |
| | LD50 Oral | Rat | 400 mg/kg | - |

**Acute toxicity estimates**

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| S2/12021000B-GRY_SBPR_P21 | N/A | 44215.7 | N/A | 175.1 | N/A |
| Reaction mass of ethylbenzene and xylene | N/A | 1100 | 5000 | N/A | N/A |
| cyclohexanone | N/A | N/A | N/A | 11 | N/A |
| xylene | N/A | 1100 | N/A | 11 | N/A |
| cyclohexanone | N/A | N/A | N/A | 11 | N/A |
| maleic anhydride | 500 | N/A | N/A | N/A | N/A |

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| butanone | Skin - Mild irritant | Rabbit | - | 24 hours 14 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 402 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| Reaction mass of ethylbenzene and xylene | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 Ul | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| cyclohexanone | Eyes - Severe irritant | Rabbit | - | 24 hours 250 ug | - |
| | Eyes - Severe irritant | Rabbit | - | 20 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 Ul | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |

# 11. Toxicological information

| | | | | | |
|---|---|---|---|---|---|
| cyclohexanone | Eyes - Severe irritant | Rabbit | - | 24 hours 250 ug | - |
| | Eyes - Severe irritant | Rabbit | - | 20 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| zinc oxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| maleic anhydride | Eyes - Severe irritant | Rabbit | - | 1 % | - |

**Respiratory sensitization/Skin sensitization**

Not available.

**Germ Cell Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Reproductive toxicity**

Not available.

**Specific target organ toxicity (single exposure)**

| Name | Category | Route of exposure | Target organs |
|---|---|---|---|
| butanone | Category 3 | - | Narcotic effects |
| Reaction mass of ethylbenzene and xylene | Category 3 | - | Respiratory tract irritation |
| xylene | Category 3 | - | Respiratory tract irritation |

**Specific target organ toxicity (repeated exposure)**

| Name | Category | Route of exposure | Target organs |
|---|---|---|---|
| Reaction mass of ethylbenzene and xylene | Category 2 | - | - |
| maleic anhydride | Category 1 | inhalation | respiratory system |

**Aspiration hazard**

| Name | Result |
|---|---|
| Reaction mass of ethylbenzene and xylene | ASPIRATION HAZARD - Category 1 |
| xylene | ASPIRATION HAZARD - Category 1 |

# 12. Ecological information

**Ecotoxicity**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| butanone | Acute EC50 >500000 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 >500 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute EC50 5091000 µg/l Fresh water | Daphnia - Daphnia magna - Larvae | 48 hours |
| | Acute LC50 3220000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 5600 ppm Fresh water | Fish - Gambusia affinis - Adult | 96 hours |
| trizinc bis(orthophosphate) | Acute LC50 90 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| titanium dioxide | Acute EC50 19.3 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute EC50 27.8 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute EC50 35.306 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 3 mg/l Fresh water | Crustaceans - Ceriodaphnia | 48 hours |

# 12. Ecological information

| | | | |
|---|---|---|---|
| | | dubia - Neonate | |
| | Acute LC50 13.4 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 11 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 3.6 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 15.9 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 6.5 mg/l Fresh water | Daphnia - Daphnia pulex - Neonate | 48 hours |
| | Acute LC50 13 mg/l Fresh water | Daphnia - Daphnia pulex - Neonate | 48 hours |
| | Acute LC50 >1000 mg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 >1000000 µg/l Marine water | Fish - Fundulus heteroclitus | 96 hours |
| Barite (Ba(SO4)) | Acute LC50 76000000 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| Reaction mass of ethylbenzene and xylene | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| cyclohexanone | Acute EC50 32.9 mg/l Fresh water | Algae - Chlamydomonas reinhardtii - Exponential growth phase | 72 hours |
| | Acute LC50 630000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 527000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 732000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| xylene | Acute EC50 90 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |
| | Acute LC50 8.5 ppm Marine water | Crustaceans - Palaemonetes pugio - Adult | 48 hours |
| | Acute LC50 8500 µg/l Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| | Acute LC50 15700 µg/l Fresh water | Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| | Acute LC50 20870 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 19000 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 16940 µg/l Fresh water | Fish - Carassius auratus | 96 hours |
| cyclohexanone | Acute EC50 32.9 mg/l Fresh water | Algae - Chlamydomonas reinhardtii - Exponential growth phase | 72 hours |
| | Acute LC50 630000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 527000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 732000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| carbon black, respirable powder | Acute EC50 37.563 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 61.547 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| zinc oxide | Acute EC50 1 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute EC50 0.622 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute EC50 0.481 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 1.25 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 98 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 2246000 µg/l Fresh water | Fish - Pimephales promelas - Neonate | 96 hours |
| | Acute LC50 1.1 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute LC50 3.969 mg/l Fresh water | Fish - Danio rerio - Adult | 96 hours |

# 12. Ecological information

| | | | |
|---|---|---|---|
| maleic anhydride | Acute LC50 2.525 mg/l Fresh water<br>Acute LC50 230 ppm Fresh water | Fish - Danio rerio - Adult<br>Fish - Gambusia affinis - Adult | 96 hours<br>96 hours |

**Persistence/degradability**

Not available.

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| butanone | 0.3 | - | low |
| trizinc bis(orthophosphate) | - | 60960 | high |
| Reaction mass of ethylbenzene and xylene | 3.12 | 8.1 to 25.9 | low |
| cyclohexanone | 0.86 | - | low |
| xylene | 3.12 | 8.1 to 25.9 | low |
| cyclohexanone | 0.86 | - | low |
| zinc oxide | - | 28960 | high |
| maleic anhydride | -2.78 | - | low |

**Mobility in soil** : Not available.

**Hazardous to the ozone layer** : Not applicable.

**Other adverse effects** : No known significant effects or critical hazards.

# 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

# 14. Transport information

| | UN | IMDG | IATA |
|---|---|---|---|
| **UN number** | UN1263 | UN1263 | UN1263 |
| **UN proper shipping name** | PAINT | PAINT | PAINT |
| **Transport hazard class(es)** | 3  | 3  | 3  |
| **Packing group** | II | II | II |

# 14. Transport information

| | | | |
|---|---|---|---|
| **Environmental hazards** | Yes. The environmentally hazardous substance mark is not required. | Marine Pollutant(s): trizinc bis(orthophosphate) | Yes. The environmentally hazardous substance mark is not required. |

**Additional information**

**UN** : **Viscous liquid exception** This class 3 material can be shipped as Packing Group III in packagings up to 450 L.

**IMDG** : **Emergency schedules** F-E, _S-E_
The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
**Viscous liquid exception** This class 3 material can be shipped as Packing Group III in packagings up to 450 L.

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
**Viscous liquid exception** This class 3 material can be shipped as Packing Group III in packagings up to 30 L (100 L for cargo aircraft). Transport in accordance with this provision must be noted on the Shipper's Declaration.

**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.

# 15. Regulatory information

**Fire Service Law**

| Category | Substance name/Type | Danger category | Signal word | Designated quantity |
|---|---|---|---|---|
| Category IV | Class I petroleums | II | Flammable - Keep Fire Away | 200 L |

**Fire Service Law - Obstructive materials** : Listed

**ISHL**

**Substances requiring labelling**

| Ingredient name | % | Status | Reference number |
|---|---|---|---|
| butanone | ≥25 - ≤50 | Listed | 570 |
| cyclohexanone | ≤3.0 | Listed | 231 |
| titanium dioxide | ≤10 | Listed | 191 |
| Reaction mass of ethylbenzene and xylene | ≤5.0 | Listed | 136 |
| xylene | ≤3.0 | Listed | 136 |
| cyclohexanone | ≤3.0 | Listed | 231 |

**Chemicals requiring notification**

| Ingredient name | % | Status | Reference number |
|---|---|---|---|
| butanone | ≥25 - ≤50 | Listed | 570 |
| cyclohexanone | ≤3.0 | Listed | 231 |
| titanium dioxide | ≤10 | Listed | 191 |
| zinc oxide | ≤0.30 | Listed | 188 |
| Reaction mass of ethylbenzene and xylene | ≤5.0 | Listed | 136 |
| xylene | ≤3.0 | Listed | 136 |
| carbon black, respirable powder | ≤1.0 | Listed | 130 |
| cyclohexanone | ≤3.0 | Listed | 231 |

**Guideline for Preventing Health Hazard by chemical substances (Carcinogenicity)**

# 15. Regulatory information

| Ingredient name | % | Status | Reference number |
|---|---|---|---|
| ethylbenzene | <1.0 | Listed | - |

**ISHL Appendix 1** : Flammable liquid Class 3

**Organic solvents poisoning prevention** : Class 2

**Chemical Substances Control Law (CSCL)**

| Ingredient name | % | Status | Reference number |
|---|---|---|---|
| octamethylcyclotetrasiloxane | <0.010 | Monitoring | 40 |
| butanone | ≥25 - ≤50 | Priority assessment | 115 |
| cyclohexanone | ≤3.0 | Priority assessment | 131 |
| 2,6-di-tert-butyl-p-cresol | <0.10 | Priority assessment | 64 |
| Reaction mass of ethylbenzene and xylene | ≤5.0 | Priority assessment | 125 |
| 1,2,4-trimethylbenzene | ≤0.30 | Priority assessment | 49 |
| xylene | ≤3.0 | Priority assessment | 125 |
| cumene | ≤0.10 | Priority assessment | 126 |
| cyclohexanone | ≤3.0 | Priority assessment | 131 |

**Poisonous and Deleterious Substances**

| Ingredient name | % | Status | Reference number |
|---|---|---|---|
| Barite (Ba(SO4)) | ≤5.0 | Deleterious | 79 |

**Pollutant Release and Transfer Registers (PRTR)**

| Ingredient name | % | Status | Reference number |
|---|---|---|---|
| Reaction mass of ethylbenzene and xylene | 3.1 | Class 1 | 80 |
| xylene | 2.5 | Class 1 | 80 |

**JSOH Carcinogen** : Group 2B

# 16. Other information

**History**

**Date of printing** : 1 November 2022

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**Version** : 1.02

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# 16. Other information

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
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 2 | On basis of test data |
| EYE IRRITATION - Category 2A | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 | Calculation method |
| AQUATIC HAZARD (ACUTE) - Category 2 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 2 | Calculation method |

**Indicates information that has changed from previously issued version.**

**Notice to reader**

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