

VARIOPRIMER, 20 mL

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| Version | Revision Date: | SDS Number: | Date of last issue: 11/16/2022 |
| 4.2 | 06/06/2023 | 10668693-00011 | Date of first issue: 06/15/2018 |

SECTION 1. IDENTIFICATION

Product name : VARIOPRIMER, 20 mL

Product code : 890.024020

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited

Address : 345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:
CHEMTREC (24/7): 1-800-424-9300
Transport related emergencies:
CANUTEC (24/7): 1-613-996-6666 or * 666 (cell)

Urgences impliquant un déversement, incendie, explosion ou exposition:
CHEMTREC (24/7): 1-800-424-9300
Urgences liées au transport:
CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire)

E-mail address : prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use : Primers

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Flammable liquids : Category 2

Eye irritation : Category 2A

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity : Category 3
- single exposure

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Specific target organ toxicity : Category 2 (Auditory system)
- repeated exposure

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P284 Wear respiratory protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P337 + P313 If eye irritation persists: Get medical attention.
P342 + P311 If experiencing respiratory symptoms: Call a doctor.
P362 + P364 Take off contaminated clothing and wash it before reuse.

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Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

Vapors may form explosive mixture with air.

Repeated exposure may cause skin dryness or cracking.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

| Chemical name | Common Name/Synonym | CAS-No. | Concentration (% w/w) |
|--|--|------------|-----------------------|
| Butanone | Ethyl methyl ketone | 78-93-3 | $\geq 30 - < 60$ * |
| Carbon black | Lampblack | 1333-86-4 | $\geq 5 - < 10$ * |
| 2-Methoxy-1-methylethyl acetate | 2-Propanol, 1-methoxy-, 2-acetate | 108-65-6 | $\geq 5 - < 10$ * |
| Hexamethylene diisocyanate, oligomers | Hexane, 1,6-diisocyanato-, homopolymer | 28182-81-2 | $\geq 5 - < 10$ * |
| n-Butyl acetate | Acetic acid, butyl ester | 123-86-4 | $\geq 1 - < 5$ * |
| Xylene | Benzene, dimethyl- | 1330-20-7 | $\geq 1 - < 5$ * |
| Diphenylmethane diisocyanate, isomers and homologues | Polymethylene polyphenyl polyisocyanate | 9016-87-9 | $\geq 0.1 - < 1$ * |
| 4,4'-Diphenylmethane diisocyanate | Benzene, 1,1'-methylenebis[4-isocyanato- | 101-68-8 | $\geq 0.1 - < 1$ * |

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
 When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
 If not breathing, give artificial respiration.
 If breathing is difficult, give oxygen.

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- Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting. If vomiting occurs have person lean forward. Call a physician or poison control center immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Prolonged or repeated contact may dry skin and cause irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause drowsiness or dizziness. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Respiratory symptoms, including pulmonary edema, may be delayed. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Water spray in large fire situations
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.

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Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NO_x)

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Ventilate the area.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g., by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
After approximately one hour, transfer to waste container and do not seal, due to evolution of carbon dioxide.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

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| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | If sufficient ventilation is unavailable, use with local exhaust ventilation. Use explosion-proof electrical, ventilating and lighting equipment. |
| Advice on safe handling | : | Do not get on skin or clothing. Do not breathe mist or vapors. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Non-sparking tools should be used. Keep container tightly closed. Keep away from water. Protect from moisture. Already sensitized individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitizers. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. |
| Conditions for safe storage | : | Keep in properly labeled containers. Store locked up. Protect from moisture. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. |
| Materials to avoid | : | Do not store with the following product types: Strong oxidizing agents Self-reactive substances and mixtures Organic peroxides Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures which in contact with water emit flammable gases Explosives Gases Very acutely toxic substances and mixtures |
| Recommended storage temperature | : | > 0 - < 35 °C |

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---------------------------------------|------------|------------------------------------|--|-----------|
| Butanone | 78-93-3 | TWA | 200 ppm 590 mg/m ³ | CA AB OEL |
| | | STEL | 300 ppm 885 mg/m ³ | CA AB OEL |
| | | TWA | 50 ppm | CA BC OEL |
| | | STEL | 100 ppm | CA BC OEL |
| | | TWAEV | 50 ppm 150 mg/m ³ | CA QC OEL |
| | | STEV | 100 ppm 300 mg/m ³ | CA QC OEL |
| | | TWA | 200 ppm | ACGIH |
| | | STEL | 300 ppm | ACGIH |
| Carbon black | 1333-86-4 | TWA | 3.5 mg/m ³ | CA AB OEL |
| | | TWA (Inhalable) | 3 mg/m ³ | CA BC OEL |
| | | TWAEV (inhalable dust) | 3 mg/m ³ | CA QC OEL |
| | | TWA (Inhalable particulate matter) | 3 mg/m ³ | ACGIH |
| 2-Methoxy-1-methylethyl acetate | 108-65-6 | TWA | 50 ppm | CA BC OEL |
| | | STEL | 75 ppm | CA BC OEL |
| | | TWA | 50 ppm 270 mg/m ³ | CA ON OEL |
| Hexamethylene diisocyanate, oligomers | 28182-81-2 | TWA | 0.005 ppm | CA BC OEL |
| | | C | 0.01 ppm | CA BC OEL |
| n-Butyl acetate | 123-86-4 | STEL | 200 ppm 950 mg/m ³ | CA AB OEL |
| | | TWA | 150 ppm 713 mg/m ³ | CA AB OEL |
| | | TWAEV | 50 ppm | CA QC OEL |
| | | STEV | 150 ppm | CA QC OEL |
| | | TWA | 50 ppm | CA BC OEL |
| | | STEL | 150 ppm | CA BC OEL |
| | | TWA | 50 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| Xylene | 1330-20-7 | TWA | 100 ppm 434 mg/m ³ | CA AB OEL |
| | | STEL | 150 ppm 651 mg/m ³ | CA AB OEL |
| | | TWAEV | 100 ppm 434 mg/m ³ | CA QC OEL |
| | | STEV | 150 ppm 651 mg/m ³ | CA QC OEL |

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|--|-----------|-------|--------------------------------------|-----------|
| | | TWA | 100 ppm | CA BC OEL |
| | | STEL | 150 ppm | CA BC OEL |
| | | TWA | 20 ppm | ACGIH |
| Diphenylmethane diisocyanate, isomers and homologues | 9016-87-9 | TWA | 0.005 ppm 0.07 mg/m ³ | CA AB OEL |
| | | TWAEV | 0.005 ppm 0.051 mg/m ³ | CA QC OEL |
| | | TWA | 0.005 ppm | CA BC OEL |
| | | C | 0.01 ppm | CA BC OEL |
| 4,4'-Diphenylmethane diisocyanate | 101-68-8 | TWA | 0.005 ppm | CA BC OEL |
| | | C | 0.01 ppm | CA BC OEL |
| | | TWA | 0.005 ppm | CA ON OEL |
| | | C | 0.02 ppm | CA ON OEL |
| | | TWAEV | 0.005 ppm 0.051 mg/m ³ | CA QC OEL |
| | | TWA | 0.005 ppm | ACGIH |

Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|------------|-----------|-----------------------|---------------------|--|---------------------------|-----------|
| Butanone | 78-93-3 | methyl ethyl ketone | Urine | End of shift (As soon as possible after exposure ceases) | 2 mg/l | ACGIH BEI |
| Xylene | 1330-20-7 | Methyl-hippuric acids | Urine | End of shift (As soon as possible after exposure ceases) | 1.5 g/g creatinine | ACGIH BEI |

Engineering measures : Processing may form hazardous compounds (see section 10).
 Minimize workplace exposure concentrations.
 If sufficient ventilation is unavailable, use with local exhaust ventilation.
 Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapor type

Hand protection

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| Material | : | Latex gloves |
| Break through time | : | >= 30 min |
| Glove thickness | : | 0.8 mm |

| | | |
|---------|---|---|
| Remarks | : | Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. |
|---------|---|---|

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| Eye protection | : | Wear the following personal protective equipment: Safety goggles |
|----------------|---|---|

| | | |
|--------------------------|---|--|
| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
|--------------------------|---|--|

| | | |
|------------------|---|--|
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use. |
|------------------|---|--|

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|------------|---|--------|
| Appearance | : | liquid |
|------------|---|--------|

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|-------|---|-------|
| Color | : | black |
|-------|---|-------|

| | | |
|------|---|----------------|
| Odor | : | characteristic |
|------|---|----------------|

| | | |
|----------------|---|-------------------|
| Odor Threshold | : | No data available |
|----------------|---|-------------------|

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|----|---|---|
| pH | : | substance/mixture is non-soluble (in water) |
|----|---|---|

| | | |
|------------------------------|---|-------------------|
| Melting point/freezing point | : | No data available |
|------------------------------|---|-------------------|

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|---|---|-------|
| Initial boiling point and boiling range | : | 79 °C |
|---|---|-------|

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|--|---|--|
| Flash point | : | -4 °C |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Flammability (liquids) | : | Ignitable (see flash point) |
| Upper explosion limit / Upper flammability limit | : | 11.5 %(V) |
| Lower explosion limit / Lower flammability limit | : | 1.8 %(V) |
| Vapor pressure | : | 105 hPa (20 °C) |
| Relative vapor density | : | No data available |
| Relative density | : | No data available |
| Density | : | 0.92 g/cm ³ (20 °C) |
| Solubility(ies) | : | |
| Water solubility | : | partly miscible |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Autoignition temperature | : | > 300 °C |
| Decomposition temperature | : | No data available |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Particle size | : | Not applicable |

SECTION 10. STABILITY AND REACTIVITY

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|------------------------------------|---|---|
| Reactivity | : | Not classified as a reactivity hazard. |
| Chemical stability | : | Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions. Polymerizes at high temperatures with evolution of carbon dioxide. |
| Possibility of hazardous reactions | : | Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; the- |

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se reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate.
Exothermic reaction with acids, amines and alcohols
Reacts with water to form carbon dioxide and heat
Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea.
Hazardous decomposition products will be formed upon contact with water or humid air.

Conditions to avoid : Exposure to moisture.
Heat, flames and sparks.

Incompatible materials : Oxidizing agents
Acids
Bases
Water
Alcohols
Amines
Ammonia
Aluminum
Zinc
Brass
Tin
Copper
Galvanized metals
Humid air

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

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Components:**Butanone:**

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| Acute oral toxicity | : | LD50 (Rat): > 2,000 - 5,000 mg/kg Remarks: Based on data from similar materials |
| Acute inhalation toxicity | : | LC50 (Rat): > 25.5 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 436 Remarks: Based on data from similar materials |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg |

Carbon black:

| | | |
|---------------------|---|----------------------------|
| Acute oral toxicity | : | LD50 (Rat): > 10,000 mg/kg |
|---------------------|---|----------------------------|

2-Methoxy-1-methylethyl acetate:

| | | |
|---------------------------|---|--|
| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg |
| Acute inhalation toxicity | : | LC0 (Rat): 9.48 mg/l Exposure time: 4 h Test atmosphere: vapor |
| Acute dermal toxicity | : | LD50 (Rat): > 5,000 mg/kg |

Hexamethylene diisocyanate, oligomers:

| | | |
|---------------------------|---|---|
| Acute oral toxicity | : | LD50 (Rat, female): > 2,500 mg/kg Method: OECD Test Guideline 423 Assessment: The substance or mixture has no acute oral toxicity |
| Acute inhalation toxicity | : | Acute toxicity estimate: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment |
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity |

n-Butyl acetate:

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|---------------------------|---|--|
| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): > 21.1 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg |

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Xylene:

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| Acute oral toxicity | : | LD50 (Rat): 3,523 mg/kg Method: Directive 67/548/EEC, Annex V, B.1. |
| Acute inhalation toxicity | : | LC50 (Rat): 27.571 mg/l Exposure time: 4 h Test atmosphere: vapor |
| Acute dermal toxicity | : | LD50 (Rabbit): > 4,200 mg/kg |

Diphenylmethane diisocyanate, isomers and homologues:

| | | |
|---------------------------|---|--|
| Acute oral toxicity | : | LD50 (Rat): > 5,000 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): > 2.24 mg/l Exposure time: 1 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity |

4,4'-Diphenylmethane diisocyanate:

| | | |
|---------------------------|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on data from similar materials |
| Acute inhalation toxicity | : | LC50 (Rat): > 2.24 mg/l Exposure time: 1 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5,000 mg/kg Remarks: Based on data from similar materials |

Skin corrosion/irritation

Not classified based on available information.

Components:**Butanone:**

| | | |
|------------|---|---|
| Assessment | : | Repeated exposure may cause skin dryness or cracking. |
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |
| Remarks | : | Based on data from similar materials |

Carbon black:

| | | |
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| Species | : | Rabbit |
| Result | : | No skin irritation |

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2-Methoxy-1-methylethyl acetate:

| | | |
|---------|---|--------------------|
| Species | : | Rabbit |
| Result | : | No skin irritation |

Hexamethylene diisocyanate, oligomers:

| | | |
|---------|---|-------------------------|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |

n-Butyl acetate:

| | | |
|---------|---|--------------------|
| Species | : | Rabbit |
| Result | : | No skin irritation |

| | | |
|------------|---|---|
| Assessment | : | Repeated exposure may cause skin dryness or cracking. |
|------------|---|---|

Xylene:

| | | |
|---------|---|-----------------|
| Species | : | Rabbit |
| Result | : | Skin irritation |

Diphenylmethane diisocyanate, isomers and homologues:

| | | |
|---------|---|-----------------|
| Species | : | Rabbit |
| Result | : | Skin irritation |

4,4'-Diphenylmethane diisocyanate:

| | | |
|---------|---|--------------------------------------|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | Skin irritation |
| Remarks | : | Based on data from similar materials |

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:**Butanone:**

| | | |
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| Species | : | Rabbit |
| Result | : | Irritation to eyes, reversing within 21 days |
| Method | : | OECD Test Guideline 405 |

Carbon black:

| | | |
|---------|---|-------------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |

2-Methoxy-1-methylethyl acetate:

| | | |
|---------|---|-------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |

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Hexamethylene diisocyanate, oligomers:

| | | |
|---------|---|-------------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |

n-Butyl acetate:

| | | |
|---------|---|-------------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Method | : | OECD Test Guideline 405 |

Xylene:

| | | |
|---------|---|--|
| Species | : | Rabbit |
| Result | : | Irritation to eyes, reversing within 21 days |

Diphenylmethane diisocyanate, isomers and homologues:

| | | |
|--------|---|---|
| Result | : | Irritation to eyes, reversing within 7 days |
|--------|---|---|

4,4'-Diphenylmethane diisocyanate:

| | | |
|---------|---|---|
| Result | : | Irritation to eyes, reversing within 7 days |
| Remarks | : | Based on national or regional regulation. |

Respiratory or skin sensitization**Skin sensitization**

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Product:

| | | |
|------------|---|--|
| Assessment | : | Probability of respiratory sensitization in humans based on animal testing |
|------------|---|--|

Components:**Butanone:**

| | | |
|--------------------|---|-------------------------|
| Test Type | : | Buehler Test |
| Routes of exposure | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

Carbon black:

| | | |
|--------------------|---|-------------------------|
| Test Type | : | Buehler Test |
| Routes of exposure | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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2-Methoxy-1-methylethyl acetate:

| | |
|--------------------|---------------------------|
| Test Type | : Maximization Test |
| Routes of exposure | : Skin contact |
| Species | : Guinea pig |
| Method | : OECD Test Guideline 406 |
| Result | : negative |

Hexamethylene diisocyanate, oligomers:

| | |
|--------------------|---------------------------------|
| Test Type | : Local lymph node assay (LLNA) |
| Routes of exposure | : Skin contact |
| Species | : Mouse |
| Method | : OECD Test Guideline 429 |
| Result | : positive |

| | |
|------------|---|
| Assessment | : Probability or evidence of skin sensitization in humans |
|------------|---|

| | |
|--------------------|--------------|
| Routes of exposure | : Inhalation |
| Species | : Guinea pig |
| Result | : negative |

n-Butyl acetate:

| | |
|--------------------|---------------------|
| Test Type | : Maximization Test |
| Routes of exposure | : Skin contact |
| Species | : Guinea pig |
| Result | : negative |

Xylene:

| | |
|--------------------|---------------------------------|
| Test Type | : Local lymph node assay (LLNA) |
| Routes of exposure | : Skin contact |
| Species | : Mouse |
| Result | : negative |

Diphenylmethane diisocyanate, isomers and homologues:

| | |
|--------------------|--|
| Test Type | : Buehler Test |
| Routes of exposure | : Skin contact |
| Species | : Guinea pig |
| Result | : positive |
| Remarks | : Based on data from similar materials |

| | |
|------------|---|
| Assessment | : Probability or evidence of skin sensitization in humans |
|------------|---|

| | |
|--------------------|-------------------------------|
| Routes of exposure | : inhalation (dust/mist/fume) |
| Species | : Rat |
| Result | : positive |

| | |
|------------|--|
| Assessment | : Probability of respiratory sensitization in humans based on animal testing |
|------------|--|

4,4'-Diphenylmethane diisocyanate:

| | |
|--------------------|----------------|
| Test Type | : Buehler Test |
| Routes of exposure | : Skin contact |

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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| | | |
|--------------------|---|--|
| Species | : | Guinea pig |
| Result | : | positive |
| Assessment | : | Probability or evidence of skin sensitization in humans |
| Routes of exposure | : | Inhalation |
| Species | : | Rat |
| Result | : | positive |
| Remarks | : | Based on data from similar materials |
| Assessment | : | Probability of respiratory sensitization in humans based on animal testing |

Germ cell mutagenicity

Not classified based on available information.

Components:**Butanone:**

| | | |
|-----------------------|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) Result: negative Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: Chromosome aberration test in vitro Result: negative Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: negative Test Type: Saccharomyces cerevisiae, gene mutation assay (in vitro) Result: negative |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Result: negative |

Carbon black:

| | | |
|-----------------------|---|--|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Test Type: In vitro sister chromatid exchange assay in mammalian cells Method: OECD Test Guideline 479 |
|-----------------------|---|--|

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Result: negative

Test Type: in vitro micronucleus test

Method: OECD Test Guideline 487

Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in *Drosophila melanogaster* (in vivo)
Species: *Drosophila melanogaster* (vinegar fly)
Application Route: Ingestion
Method: OECD Test Guideline 477
Result: negative

2-Methoxy-1-methylethyl acetate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Hexamethylene diisocyanate, oligomers:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative

n-Butyl acetate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Xylene:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Test Type: Chromosome aberration test in vitro

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: In vitro sister chromatid exchange assay in mammalian cells

Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Skin contact
Result: negative

Diphenylmethane diisocyanate, isomers and homologues:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

4,4'-Diphenylmethane diisocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:**Carbon black:**

Species : Rat
Application Route : Inhalation
Exposure time : 24 Months
Result : positive

Species : Rat
Application Route : Ingestion
Exposure time : 2 Years
Result : negative

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

2-Methoxy-1-methylethyl acetate:

Species : Rat
Application Route : inhalation (vapor)
Exposure time : 2 Years
Result : negative
Remarks : Based on data from similar materials

Xylene:

Species : Rat
Application Route : Ingestion
Exposure time : 103 weeks
Result : negative

Diphenylmethane diisocyanate, isomers and homologues:

Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 Years
Result : positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

4,4'-Diphenylmethane diisocyanate:

Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 Years
Result : positive
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:**Butanone:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: negative

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Carbon black:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Test Type: Embryo-fetal development
Species: Mouse
Application Route: inhalation (dust/mist/fume)
Result: negative

2-Methoxy-1-methylethyl acetate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

n-Butyl acetate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 416
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Xylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Diphenylmethane diisocyanate, isomers and homologues:

Effects on fetal development : Test Type: Embryo-fetal development

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Species: Rat
Application Route: inhalation (dust/mist/fume)
Result: negative

4,4'-Diphenylmethane diisocyanate:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (dust/mist/fume)
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

May cause drowsiness or dizziness.

Components:**Butanone:**

Assessment : May cause drowsiness or dizziness.

2-Methoxy-1-methylethyl acetate:

Assessment : May cause drowsiness or dizziness.

Hexamethylene diisocyanate, oligomers:

Assessment : May cause respiratory irritation.

n-Butyl acetate:

Assessment : May cause drowsiness or dizziness.

Xylene:

Assessment : May cause respiratory irritation.

Diphenylmethane diisocyanate, isomers and homologues:

Assessment : May cause respiratory irritation.

4,4'-Diphenylmethane diisocyanate:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Components:**Xylene:**

Routes of exposure : inhalation (vapor)
Target Organs : Auditory system
Assessment : Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

VARIOPRIMER, 20 mL

| | | | |
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Diphenylmethane diisocyanate, isomers and homologues:

| | |
|--------------------|---|
| Routes of exposure | : inhalation (dust/mist/fume) |
| Target Organs | : Respiratory Tract |
| Assessment | : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d. |

4,4'-Diphenylmethane diisocyanate:

| | |
|--------------------|---|
| Routes of exposure | : inhalation (dust/mist/fume) |
| Target Organs | : Respiratory Tract |
| Assessment | : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d. |

Repeated dose toxicity**Components:****Butanone:**

| | |
|-------------------|---------------------------|
| Species | : Rat |
| NOAEL | : 14.84 mg/l |
| Application Route | : inhalation (vapor) |
| Exposure time | : 90 Days |
| Method | : OECD Test Guideline 413 |

2-Methoxy-1-methylethyl acetate:

| | |
|-------------------|---------------------------|
| Species | : Rat |
| NOAEL | : > 1,000 mg/kg |
| Application Route | : Ingestion |
| Exposure time | : 41 - 45 Days |
| Method | : OECD Test Guideline 422 |

| | |
|-------------------|--|
| Species | : Mouse |
| NOAEL | : 1.62 mg/l |
| Application Route | : inhalation (vapor) |
| Exposure time | : 2 y |
| Remarks | : Based on data from similar materials |

| | |
|-------------------|--|
| Species | : Rabbit |
| NOAEL | : > 1,838 mg/kg |
| Application Route | : Skin contact |
| Exposure time | : 90 Days |
| Remarks | : Based on data from similar materials |

n-Butyl acetate:

| | |
|-------------------|----------------------|
| Species | : Rat |
| NOAEL | : 2.4 mg/l |
| Application Route | : inhalation (vapor) |
| Exposure time | : 90 Days |

Xylene:

| | |
|---------|------------------|
| Species | : Rat |
| LOAEL | : > 0.2 - 1 mg/l |

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Application Route : inhalation (vapor)
Exposure time : 13 Weeks
Remarks : Based on data from similar materials

Species : Rat
LOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Diphenylmethane diisocyanate, isomers and homologues:

Species : Rat
NOAEL : 1.4 mg/m³
LOAEL : 4.1 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 13 Weeks

4,4'-Diphenylmethane diisocyanate:

Species : Rat
NOAEL : 0,2 mg/m³
LOAEL : 1 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 y
Remarks : Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:**Butanone:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

Xylene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Butanone:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2,993 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 308 mg/l
aquatic invertebrates
Exposure time: 48 h
Method: OECD Test Guideline 202

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 2,029 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 1,240 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Carbon black:

Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 5,600 mg/l
Exposure time: 24 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL10 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

EL50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

2-Methoxy-1-methylethyl acetate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 - 180 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (algae)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): >= 100 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Toxicity to microorganisms : EC10: > 1,000 mg/l
Exposure time: 0.5 h

Hexamethylene diisocyanate, oligomers:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 127 mg/l
Exposure time: 48 h
Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae/aquatic plants : EC10 (Desmodesmus subspicatus (green algae)): 370 mg/l
Exposure time: 72 h

ErC50 (Desmodesmus subspicatus (green algae)): > 1,000 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC10: 880 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

n-Butyl acetate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 18 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp. (Water flea)): 44 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 397 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 196 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 23.2 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : IC50 (Tetrahymena pyriformis): 356 mg/l
Exposure time: 40 h

Xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l

VARIOPRIMER, 20 mL

| | | | |
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Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): 10 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l
Exposure time: 35 d
Method: OECD Test Guideline 210
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Diphenylmethane diisocyanate, isomers and homologues:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1,000 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 10 mg/l
Exposure time: 21 d

4,4'-Diphenylmethane diisocyanate:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 129.7 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 1,640 mg/l
Exposure time: 72 h

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Persistence and degradability**Components:****Butanone:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

2-Methoxy-1-methylethyl acetate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hexamethylene diisocyanate, oligomers:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: Regulation (EC) No. 440/2008, Annex, C.4-E

n-Butyl acetate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Xylene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Diphenylmethane diisocyanate, isomers and homologues:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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Exposure time: 28 d

4,4'-Diphenylmethane diisocyanate:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302
Remarks: Based on data from similar materials

Bioaccumulative potential**Components:****Butanone:**

Partition coefficient: n-octanol/water : log Pow: 0.3

2-Methoxy-1-methylethyl acetate:

Partition coefficient: n-octanol/water : log Pow: 1.2

Hexamethylene diisocyanate, oligomers:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Calculation

n-Butyl acetate:

Partition coefficient: n-octanol/water : log Pow: 2.3

Xylene:

Partition coefficient: n-octanol/water : log Pow: 3.16
Remarks: Calculation

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200

Partition coefficient: n-octanol/water : log Pow: 4.51

Mobility in soil

No data available

Other adverse effects

No data available

VARIOPRIMER, 20 mL

| | | | |
|---------|----------------|----------------|---------------------------------|
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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Dispose of in accordance with local regulations.
- Do not dispose of waste into sewer.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
- Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

- UN number : UN 1866
- Proper shipping name : RESIN SOLUTION
- Class : 3
- Packing group : II
- Labels : 3

IATA-DGR

- UN/ID No. : UN 1866
- Proper shipping name : Resin solution
- Class : 3
- Packing group : II
- Labels : Flammable Liquids
- Packing instruction (cargo aircraft) : 364
- Packing instruction (passenger aircraft) : 353

IMDG-Code

- UN number : UN 1866
- Proper shipping name : RESIN SOLUTION
- Class : 3
- Packing group : II
- Labels : 3
- EmS Code : F-E, S-E
- Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**TDG**

- UN number : UN 1866
- Proper shipping name : RESIN SOLUTION

VARIOPRIMER, 20 mL

| | | | |
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| | | |
|------------------|---|-----|
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |
| ERG Code | : | 127 |
| Marine pollutant | : | no |

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**The ingredients of this product are reported in the following inventories:**

| | | |
|-----|---|--|
| DSL | : | All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL). |
|-----|---|--|

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

| | | |
|-------------------|---|---|
| ACGIH | : | USA. ACGIH Threshold Limit Values (TLV) |
| ACGIH BEI | : | ACGIH - Biological Exposure Indices (BEI) |
| CA AB OEL | : | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) |
| CA BC OEL | : | Canada. British Columbia OEL |
| CA ON OEL | : | Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act. |
| CA QC OEL | : | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
| ACGIH / TWA | : | 8-hour, time-weighted average |
| ACGIH / STEL | : | Short-term exposure limit |
| CA AB OEL / TWA | : | 8-hour Occupational exposure limit |
| CA AB OEL / STEL | : | 15-minute occupational exposure limit |
| CA BC OEL / TWA | : | 8-hour time weighted average |
| CA BC OEL / STEL | : | short-term exposure limit |
| CA BC OEL / C | : | ceiling limit |
| CA ON OEL / C | : | Ceiling Limit (C) |
| CA ON OEL / TWA | : | Time-Weighted Average Limit (TWA) |
| CA QC OEL / TWAEV | : | Time-weighted average exposure value |
| CA QC OEL / STEV | : | Short-term exposure value |

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized Sys-

VARIOPRIMER, 20 mL

| | | | |
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tem; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 06/06/2023
Date format : mm/dd/yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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