



Safety Data Sheet

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|-------------------------------|-----------------------------------|
| Product identifier | Med Acrylic Enamel Reducer |
| Other means of identification | |
| Product code | FS 5093-53 |
| Recommended use | Solvent |

Manufacturer/Importer/Supplier/Distributor information

| | |
|--------------|--|
| Company name | INTERNATIONAL AUTOBODY MARKETING GROUP |
| Address | 1505 NORTH HAYDEN RD, SUITE 111 SCOTTSDALE, AZ 85257 UNITED STATES |
| Website | www.5starxtreme.com |
| Telephone | 1-87-REFINISH 480.451.4451 |

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|------------------------|---|
| Emergency phone number | 800-424-9300 ChemTrec EMERGENCY 24 Hrs. |
|------------------------|---|

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

| | |
|---|--|
| Flammable liquids | Category 2 |
| Acute toxicity (Inhalation) | Category 4 |
| Skin irritation | Category 2 |
| Eye irritation | Category 2A |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 2 |
| Reproductive toxicity | Category 2 |
| Specific target organ tox- icity - single exposure | Category 1 (Eyes, Central nervous system) |
| Specific target organ tox- icity - single exposure | Category 3 (Central nervous system) |
| Specific target organ tox- | Category 2 (Liver, Kidney, Central nervous system, Au- |

icity - repeated exposure

itory system)

Specific target organ toxicity - repeated exposure (Inhalation)

Category 2 (Auditory system, Eyes)

Aspiration hazard

Category 1

GHS Label element

Hazard pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs (Eyes, Central nervous system).
H373 May cause damage to organs (Liver, Kidney, Central nervous system, Auditory system) through prolonged or repeated exposure.
H373 May cause damage to organs (Auditory system, Eyes) through prolonged or repeated exposure if inhaled.

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.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/

spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ eye protection/ face protection.

P281 Use personal protective equipment as required.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician 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.

P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

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

Potential Health Effects

Carcinogenicity:

| | |
|-------------|---|
| IARC | Group 2B: Possibly carcinogenic to humans |
| 64742-49-0 | Naphtha (pet), hydrotreated It |
| 64742-89-8 | Solvent naphtha (pet), It |

aliph.

100-41-4

Ethylbenzene

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

| | |
|----------------|---------------------------|
| Appearance | liquid |
| Colour | clear, colourless |
| Odour | No data available |
| Hazard Summary | No information available. |

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

| CAS-No. | Chemical Name | Concentration (%) |
|------------|--|-------------------|
| 108-88-3 | Toluene | 30 - 50 |
| 64742-49-0 | Naphtha (pet), hydrotreated lt | 0 - 30 |
| 64742-89-8 | Solvent naphtha (pet), lt aliph. | 0 - 30 |
| 68410-97-9 | Distillates, pet, lt dist hydrotreat process, low-boil | 0 - 30 |
| 67-64-1 | Acetone | 10 - 20 |
| 111-76-2 | 2-Butoxy ethanol | 5 - 10 |
| 1330-20-7 | Mixed xylenes | 5 - 10 |
| 67-56-1 | Methanol | 1 - 5 |
| 100-41-4 | Ethylbenzene | 1 - 5 |
| 142-82-5 | Heptane | 0.1 - 1 |

Special Notes: Functionally equivalent petroleum streams may be found in this preparation at varying concentrations. ,Mixed Xylenes contains the isomers o-, m-, p- Xylene, and Ethylbenzene. Trace amounts of Toluene

and Benzene may also be present as impurities.

SECTION 4. FIRST AID MEASURES

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| General advice | Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended. |
| If inhaled | Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice. |
| In case of skin contact | If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes. |
| In case of eye contact | Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. |
| If swallowed | Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital. |

SECTION 5. FIREFIGHTING MEASURES

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| Suitable extinguishing media | Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical |
| Unsuitable extinguishing media | High volume water jet |
| Specific hazards during firefighting | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion | Carbon oxides |

| | |
|---|---|
| products | |
| Specific extinguishing methods | Use a water spray to cool fully closed containers. |
| Further information | Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. |
| Special protective equipment for firefighters | Wear self-contained breathing apparatus for fire-fighting if necessary. |

NFPA Flammable and Combustible Liquids Classification:
Flammable Liquid Class IB

SECTION 6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. |
| Environmental precautions | Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). |

SECTION 7. HANDLING AND STORAGE

| | |
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| Advice on safe handling | Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. |
|-------------------------|--|

Smoking, eating and drinking should be prohibited in the application area.
 Take precautionary measures against static discharges.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Container may be opened only under exhaust ventilation hood.
 Open drum carefully as content may be under pressure.
 Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage

No smoking.
 Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.
 Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| CAS-No. | Components | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|------------|----------------------------------|----------------------------------|--|-----------|
| 108-88-3 | Toluene | TWA | 20 ppm | ACGIH |
| | | TWA | 100 ppm 375 mg/m ³ | NIOSH REL |
| | | ST | 150 ppm 560 mg/m ³ | NIOSH REL |
| | | TWA | 200 ppm | OSHA Z-2 |
| | | CEIL | 300 ppm | OSHA Z-2 |
| | | Peak | 500 ppm | OSHA Z-2 |
| | | TWA | 100 ppm 375 mg/m ³ | OSHA P0 |
| | | STEL | 150 ppm 560 mg/m ³ | OSHA P0 |
| 64742-49-0 | Naphtha (pet), hydrotreated lt | TWA | 500 ppm 2,000 mg/m ³ | OSHA Z-1 |
| | | TWA | 400 ppm 1,600 mg/m ³ | OSHA P0 |
| 64742-89-8 | Solvent naphtha (pet), lt aliph. | TWA | 500 ppm 2,000 mg/m ³ | OSHA Z-1 |

| | | | | |
|-----------|------------------|------|--------------------------|-----------|
| | | TWA | 400 ppm 1,600 mg/m3 | OSHA P0 |
| 67-64-1 | Acetone | TWA | 500 ppm | ACGIH |
| | | STEL | 750 ppm | ACGIH |
| | | TWA | 250 ppm 590 mg/m3 | NIOSH REL |
| | | TWA | 1,000 ppm 2,400 mg/m3 | OSHA Z-1 |
| | | TWA | 750 ppm 1,800 mg/m3 | OSHA P0 |
| | | STEL | 1,000 ppm 2,400 mg/m3 | OSHA P0 |
| 111-76-2 | 2-Butoxy ethanol | TWA | 20 ppm | ACGIH |
| | | TWA | 5 ppm 24 mg/m3 | NIOSH REL |
| | | TWA | 50 ppm 240 mg/m3 | OSHA Z-1 |
| | | TWA | 25 ppm 120 mg/m3 | OSHA P0 |
| 1330-20-7 | Mixed xylenes | TWA | 100 ppm | ACGIH |
| | | STEL | 150 ppm | ACGIH |
| | | TWA | 100 ppm 435 mg/m3 | OSHA Z-1 |
| 67-56-1 | Methanol | TWA | 200 ppm | ACGIH |
| | | STEL | 250 ppm | ACGIH |
| | | TWA | 200 ppm 260 mg/m3 | NIOSH REL |
| | | ST | 250 ppm 325 mg/m3 | NIOSH REL |
| | | TWA | 200 ppm 260 mg/m3 | OSHA Z-1 |
| | | STEL | 250 ppm 325 mg/m3 | OSHA P0 |
| | | TWA | 200 ppm 260 mg/m3 | OSHA P0 |
| 100-41-4 | Ethylbenzene | TWA | 20 ppm | ACGIH |
| | | STEL | 125 ppm | ACGIH |
| | | TWA | 100 ppm 435 mg/m3 | NIOSH REL |
| | | ST | 125 ppm 545 mg/m3 | NIOSH REL |
| | | TWA | 100 ppm 435 mg/m3 | OSHA Z-1 |
| | | TWA | 100 ppm 435 mg/m3 | OSHA P0 |
| | | STEL | 125 ppm 545 mg/m3 | OSHA P0 |
| 142-82-5 | Heptane | TWA | 85 ppm 350 mg/m3 | NIOSH REL |

| | | | | |
|--|--|------|------------------------------------|-----------|
| | | C | 440 ppm 1,800 mg/m ³ | NIOSH REL |
| | | TWA | 500 ppm 2,000 mg/m ³ | OSHA Z-1 |
| | | TWA | 400 ppm 1,600 mg/m ³ | OSHA P0 |
| | | STEL | 500 ppm 2,000 mg/m ³ | OSHA P0 |

Biological occupational exposure limits

| Components | CAS-No. | Control parameters | Biological specimen | Sam- pling time | Permissi- ble con- centration | Basis |
|------------------|----------|-------------------------|------------------------|---|-------------------------------------|---------------|
| Toluene | 108-88-3 | Toluene | In blood | Prior to last shift of work-week | 0.02 mg/l | ACGI H BEI |
| | | Toluene | Urine | End of shift (As soon as possible after exposure ceases) | 0.03 mg/l | ACGI H BEI |
| | | o-Cresol | Urine | End of shift (As soon as possible after exposure ceases) | 0.3 mg/g Creatinine | ACGI H BEI |
| Acetone | 67-64-1 | Acetone | Urine | End of shift (As soon as possible after exposure ceases) | 50 mg/l | ACGI H BEI |
| 2-Butoxy ethanol | 111-76-2 | Butoxyacetic acid (BAA) | Urine | End of shift (As soon as possible) | 200 mg/g Creatinine | ACGI H BEI |

| | | | | | | |
|--------------|----------|--|-------|--|--------------------|------------|
| | | | | after exposure ceases) | | |
| Methanol | 67-56-1 | Methanol | Urine | End of shift (As soon as possible after exposure ceases) | 15 mg/l | ACGI H BEI |
| Ethylbenzene | 100-41-4 | Sum of mandelic acid and phenyl glyoxylic acid | Urine | End of shift at end of work-week | 0.7 g/g creatinine | ACGI H BEI |

Gastro intestinal illness caused by benzene, toluene, xylene and all products in which they are contained.Health effects caused by professional use of liquid organic solvents (indicated in the table).Occupational rhinitis and asthma.Haemopathic effects caused by benzene and all products in which it is contained.

Personal protective equipment

| | |
|---------------------------------------|--|
| Respiratory protection | <p>No personal respiratory protective equipment normally required.</p> <p>In the case of vapour formation use a respirator with an approved filter.</p> |
| <p>Hand protection</p> <p>Remarks</p> | <p>The suitability for a specific workplace should be discussed with the producers of the protective gloves.</p> |
| Eye protection | <p>Eye wash bottle with pure water</p> <p>Tightly fitting safety goggles</p> <p>Wear face-shield and protective suit for abnormal processing problems.</p> |
| Skin and body protection | <p>impervious clothing</p> <p>Choose body protection according to the amount and concentration of the dangerous substance at the work place.</p> |
| Hygiene measures | <p>When using do not eat or drink.</p> <p>When using do not smoke.</p> <p>Wash hands before breaks and at the end of workday.</p> |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| Appearance | liquid |
| Colour | clear, colourless |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | No data available |
| Freezing Point | No data available |
| Boiling Point (Boiling point/boiling range) | 56 - 173.5 °C (133 - 344.3 °F) |
| Flash point | >= -20 °C (-4 °F) |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Burning rate | No data available |
| Upper explosion limit | 7 - 36.5 %(V) |
| Lower explosion limit | 0.8 - 6 %(V) |
| Vapour pressure | 231 mmHg @ 25 °C (77 °F) Calculated Vapor Pressure |
| Relative vapour density | No data available |
| Relative density | 0.809 |
| Density | 0.809 g/cm3 |
| Bulk density | No data available |
| Water solubility | No data available |
| Solubility in other sol-vents | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | No data available |
| Thermal decomposition | No data available |

| | |
|---------------------------------|---------------|
| Regulatory VOC (lbs/gal) | 6.83 |
| Regulatory VOC (g/l) | 820.00 |
| Actual VOC (lbs/gal) | 5.88 |
| Actual VOC (g/l) | 706.00 |

SECTION 10. STABILITY AND REACTIVITY

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|------------------------------------|--|
| Reactivity | No dangerous reaction known under conditions of normal use. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | Product will not undergo hazardous polymerization. No hazards to be specially mentioned. |
| Conditions to avoid | Keep away from heat, flame, sparks and other ignition sources. Do not allow evaporation to dryness. Extremes of temperature and direct sunlight. |
| Incompatible materials | Strong oxidizing agents Acids Amines Ammonia halogens Peroxides Reducing agents aluminum Bases chlorates Chlorine salts of strong bases Lead sodium Zinc |
| Hazardous decomposition products | carbon dioxide and carbon monoxide |

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

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|---------------------|---|
| Acute oral toxicity | Acute toxicity estimate : 2,327 mg/kg Method: Calculation method |
|---------------------|---|

Acute inhalation toxicity Acute toxicity estimate : 13608 ppm
Exposure time: 4 h
Test atmosphere: gas
Method: Calculation method

Acute dermal toxicity Acute toxicity estimate : 4,586 mg/kg
Method: Calculation method

Components:

108-88-3:

Acute oral toxicity LD50 (rat, male): > 5,580 mg/kg

Acute inhalation toxicity LC50 (rat, male and female): 28.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity LD50 (rabbit): > 5,000 mg/kg

64742-49-0:

Acute oral toxicity LD50 (rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity Remarks: No data available

Acute dermal toxicity LD50 (rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

64742-89-8:

Acute oral toxicity LD50 (rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity Remarks: No data available

Acute dermal toxicity LD50 (rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

68410-97-9:

Acute oral toxicity LD50 (rat): > 5,000 mg/kg

Acute inhalation toxicity Remarks: No data available

Acute dermal toxicity LD50 (rabbit): > 2,000 mg/kg

67-64-1:

| | |
|---------------------------|---|
| Acute oral toxicity | LD50 (rat): 5,800 mg/kg |
| Acute inhalation toxicity | LC50 (rat): 76.0 mg/l Exposure time: 4 h |
| Acute dermal toxicity | LD50 : > 7,426 mg/kg |
| 111-76-2: | |
| Acute oral toxicity | LD50 (rat): 745 mg/kg Assessment: The component/mixture is moderately toxic after single ingestion. |
| Acute inhalation toxicity | LC50 (rat): 550 ppm Exposure time: 4 h Assessment: The component/mixture is moderately toxic after short term inhalation. |
| Acute dermal toxicity | LD50 (rat): 1,250 mg/kg Assessment: The component/mixture is moderately toxic after single contact with skin. |
| 1330-20-7: | |
| Acute oral toxicity | LD50 (rat, male): 3,523 mg/kg Method: EU Method B.1 (Acute Toxicity, Oral) GLP: no |
| Acute inhalation toxicity | LC50 (rat, male): 6700 ppm Exposure time: 4 h Method: Directive 67/548/EEC, Annex V, B.2. Assessment: The component/mixture is moderately toxic after short term inhalation. |
| Acute dermal toxicity | LD50 (rabbit): 1,100 mg/kg Assessment: The component/mixture is moderately toxic after single contact with skin. |
| 67-56-1: | |
| Acute oral toxicity | LD50 (rat): 100 mg/kg Assessment: The component/mixture is toxic after single ingestion. |
| Acute inhalation toxicity | LC50 (rat): 5 mg/l Assessment: The component/mixture is toxic after short term inhalation. |
| Acute dermal toxicity | LD50 (rabbit): 300 mg/kg Assessment: The component/mixture is toxic after single contact with skin. |

100-41-4:

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|---|--|
| Acute inhalation toxicity | LC50 (Mouse, Male): 10 mg/l Exposure time: 4 h Assessment: The component/mixture is moderately toxic after short term inhalation. |
| Acute dermal toxicity | LD50 (rabbit): 15,433 mg/kg |
| 142-82-5: Acute oral toxicity | LD50 (rat, male and female): 5,000 mg/kg Method: OECD Test Guideline 401 Symptoms: Salivation GLP: yes Remarks: Information given is based on data obtained from similar substances. |
| Acute inhalation toxicity | LC50 (rat, male and female): 73.5 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 |
| Acute dermal toxicity | LD50 (rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: Information given is based on data obtained from similar substances. |

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

108-88-3:

Species: rabbit
Exposure time: 4 h
Result: Irritating to skin.

64742-49-0:

Species: rabbit
Result: Irritating to skin.

64742-89-8:

Species: rabbit
Exposure time: 4 h
Result: Irritating to skin.

68410-97-9:

Species: rabbit
Result: Irritating to skin.

67-64-1:

Species: rabbit
Exposure time: 24 h
Method: In vivo
Result: Mild skin irritation

111-76-2:

Species: rabbit
Result: Irritating to skin.

1330-20-7:

Species: rabbit Exposure
time: 24 h Result:
Irritating to skin.

67-56-1:

Species: rabbit
Result: No skin irritation

100-41-4:

Species: rabbit
Result: Mild skin irritation

142-82-5:

Species: rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: yes
Remarks: Based on a similar product formulation.

Serious eye damage/eye irritation**Product:**

Remarks: Irritating to eyes.

Components:**108-88-3:**

Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

64742-49-0:

Species: rabbit
Result: Irritating to eyes.

64742-89-8:

Species: rabbit
Result: Irritating to eyes.

68410-97-9:

Species: rabbit

Result: Irritating to eyes.

67-64-1:

Species: rabbit

Result: Irritating to eyes.

Exposure time: 24 h

111-76-2:

Species: rabbit

Result: Irritating to eyes.

1330-20-7:

Species: rabbit

Result: Irritating to eyes.

67-56-1:

Species: rabbit

Result: No eye irritation

100-41-4:

Species: rabbit

Result: Mild eye irritation

142-82-5:

Species: rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

GLP: yes

Remarks: Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation**Components:****108-88-3:**

Test Type: Maximisation Test (GPMT)

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

GLP: yes

64742-49-0:

Test Type: Buehler Test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

64742-89-8:

Test Type: Buehler Test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

67-64-1:

Test Type: Maximization test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

111-76-2:

Test Type: Maximization test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

1330-20-7:

Remarks: No data available

67-56-1:

Test Type: Maximisation Test (GPMT)

Species: guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

100-41-4:

Remarks: No data available

142-82-5:

Test Type: Maximization test

Species: guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

Remarks: Based on a similar product formulation.

Germ cell mutagenicity

Components:

108-88-3:

Genotoxicity in vitro

Test Type: Mammalian cell gene mutation assay

Test species: Mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo

Test Type: Dominant lethal assay

Test species: mouse (male)

Application Route: inhalation (vapour)

Exposure time: 6 h/d, 5 d/wk for 8 wks

Dose: 0, 100, 400 ppm

Method: OECD Test Guideline 478

Result: negative

| | |
|---|---|
| Germ cell mutagenicity-Assessment | Tests on bacterial or mammalian cell cultures did not show mutagenic effects. |
| 64742-49-0: Germ cell mutagenicity-Assessment | Mutagenicity classification not possible from current data |
| 64742-89-8: Germ cell mutagenicity-Assessment | Mutagenicity classification not possible from current data |
| 68410-97-9: Genotoxicity in vitro | Test Type: Mammalian cell gene mutation assay Test species: mouse lymphoma cells Result: positive |
| Genotoxicity in vivo | Test Type: In vivo micronucleus test Test species: mouse Method: OECD Test Guideline 474 Result: positive |
| Germ cell mutagenicity-Assessment | Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals |
| 67-64-1: Genotoxicity in vitro | Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: Without metabolic activation Method: OECD Test Guideline 476 Result: negative |
| | Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative |
| | Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative |
| Genotoxicity in vivo | Test Type: In vivo micronucleus test Test species: mouse Application Route: Oral Exposure time: 13 wk Dose: 5,000, 10,000, 20,000 ppm Result: negative |

| | |
|--|--|
| Germ cell mutagenicity-Assessment | Tests on bacterial or mammalian cell cultures did not show mutagenic effects. |
| 111-76-2: Genotoxicity in vitro | Test Type: Mammalian cell gene mutation assay Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Result: negative |
| Genotoxicity in vivo | Test Type: In vivo micronucleus test Test species: mouse (male) Application Route: Intraperitoneal Result: negative |
| Germ cell mutagenicity-Assessment | Tests on bacterial or mammalian cell cultures did not show mutagenic effects. |
| 1330-20-7: Genotoxicity in vitro | Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: Mutagenicity (in vitro mammalian cytogenetic test) Result: negative |
| | Test Type: Sister chromatid exchange assay in mammalian cells Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Result: negative |
| Genotoxicity in vivo | Test Type: Dominant lethal assay Test species: mouse Application Route: Subcutaneous Exposure time: 8 wk Dose: 1.0 mL/kg Method: OECD Test Guideline 478 Result: negative GLP: no |
| Germ cell mutagenicity-Assessment | Animal testing did not show any mutagenic effects. |
| 67-56-1: Genotoxicity in vitro | Test Type: DNA damage and/or repair Metabolic activation: with and without metabolic activation |

| | |
|---|--|
| | <p>vation</p> <p>Result: Ambiguous</p> |
| Genotoxicity in vivo | <p>Test Type: In vivo micronucleus test</p> <p>Test species: mouse (male and female)</p> <p>Cell type: Bone marrow</p> <p>Application Route: Intraperitoneal</p> <p>Exposure time: Single</p> <p>Dose: 0, 1920, 3200, 4480 mg/kg</p> <p>Result: negative</p> |
| Germ cell mutagenicity-Assessment | <p>Tests on bacterial or mammalian cell cultures did not show mutagenic effects.</p> |
| 100-41-4: Genotoxicity in vitro | <p>Test Type: Chromosome aberration test in vitro</p> <p>Test species: Chinese hamster ovary (CHO)</p> <p>Metabolic activation: with and without metabolic activation</p> <p>Method: OECD Test Guideline 473</p> <p>Result: negative</p> <p>GLP: no</p> <p>Test Type: Mammalian cell gene mutation assay</p> <p>Test species: mouse lymphoma cells</p> <p>Metabolic activation: with and without metabolic activation</p> <p>Method: OECD Test Guideline 476</p> <p>Result: negative</p> <p>GLP: yes</p> |
| Genotoxicity in vivo | <p>Test Type: In vivo micronucleus test</p> <p>Test species: mouse (male)</p> <p>Application Route: Oral</p> <p>Method: OECD Test Guideline 474</p> <p>Result: negative</p> <p>GLP: yes</p> <p>Test Type: DNA damage and/or repair</p> <p>Test species: mouse (male and female)</p> <p>Application Route: Inhalation</p> <p>Method: OECD Test Guideline 486</p> <p>Result: negative</p> <p>GLP: yes</p> |
| Germ cell mutagenicity-Assessment | <p>In vivo tests did not show mutagenic effects</p> |
| 142-82-5: Genotoxicity in vitro | <p>Test Type: Chromosome aberration test in vitro</p> |

| | |
|-----------------------------------|--|
| | Test species: Rat liver Metabolic activation: Without metabolic activation Method: OECD Test Guideline 473 Result: negative |
| | Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative |
| Germ cell mutagenicity-Assessment | Did not show mutagenic effects in animal experiments. |

Carcinogenicity

Components:

108-88-3:

Species: rat, (male and female)
 Application Route: inhalation (vapour)
 Exposure time: 103 wks
 Dose: 0, 600, 1200 ppm
 Frequency of Treatment: 6.5 h/d, 5 d/wk
 NOAEL: No observed adverse effect level: 1,200 ppm

Method: OECD Test Guideline 453
 Result: did not display carcinogenic properties
 Symptoms: Erosion of nasal epithelium
 GLP: yes

| | |
|------------------------------|---|
| Carcinogenicity - Assessment | Not classifiable as a human carcinogen. |
|------------------------------|---|

64742-49-0:

| | |
|------------------------------|---|
| Carcinogenicity - Assessment | Not classifiable as a human carcinogen. |
|------------------------------|---|

64742-89-8:

| | |
|------------------------------|---|
| Carcinogenicity - Assessment | Not classifiable as a human carcinogen. |
|------------------------------|---|

68410-97-9:

Species: mouse
 NOAEL: 50 mg/kg bw/day

Method: OECD Test Guideline 451
 Result: evidence of carcinogenic activity

| | |
|------------------------------|-----------------------------|
| Carcinogenicity - Assessment | : Possible human carcinogen |
|------------------------------|-----------------------------|

67-64-1:

Species: mouse, (female)
Application Route: Dermal
Exposure time: 365 d (90%) or 424 d (100%)
Dose: 0.1ml 90(71mg) or 100% (79mg)
Frequency of Treatment: 3 times per wk
NOAEL: 79

Result: did not display carcinogenic properties

Carcinogenicity - Assessment

Carcinogenicity classification not possible from current data.

111-76-2:

Species: mouse
Application Route: Inhalation
Exposure time: 2 yr
Activity duration: 6 h
Frequency of Treatment: 5 days/week
NOAEL: 125 ppm

Result: Limited evidence of carcinogenic effects with no relevance to humans

Carcinogenicity - Assessment

: Not classifiable as a human carcinogen.

1330-20-7:

Species: mouse, (male and female)
Application Route: Oral
Exposure time: 103 wk
Dose: 0, 500 or 1000 mg/kg
Frequency of Treatment: 5 days/week
Method: Directive 67/548/EEC, Annex V, B.32.
Result: did not display carcinogenic properties
GLP: No data available

Carcinogenicity - Assessment

Animal testing did not show any carcinogenic effects.

67-56-1:

Carcinogenicity - Assessment

Suspected human carcinogens

100-41-4:

Species: mouse, (male and female)
Application Route: Inhalation
Exposure time: 103 wk
Activity duration: 6 h
Dose: 0, 75, 250, 750 ppm

Frequency of Treatment: 5 days/week
NOAEL: 250 ppm

Method: OECD Test Guideline 453
Result: evidence of carcinogenic activity
Symptoms: increased incidences of alveolar/bronchiolar neoplasms, increase incidence of hepatocellular carcinomas
GLP: yes

Carcinogenicity - Assessment Suspected human carcinogens

142-82-5:

Remarks: This information is not available.

Carcinogenicity - Assessment Carcinogenicity classification not possible from current data.

Reproductive toxicity

Components:

108-88-3:

Effects on fertility

Test Type: Two-generation study
Species: rat, male and female
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 500 ppm
General Toxicity F1: NOAEC: 500 ppm
Fertility: NOAEC: 2,000 ppm
Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on fertility.
GLP: yes

Test Type: Fertility
Species: rat, male and female
Application Route: inhalation (vapour)
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 600 ppm
Symptoms: Decreased sperm count
Result: Animal testing did not show any effects on fertility.

Effects on foetal development

Species: rat
Application Route: inhalation (vapour)
Dose: 0, 250, 750, 1500, 3000 ppm

| | |
|--|---|
| | <p>Duration of Single Treatment: 10 d</p> <p>Frequency of Treatment: 6 hr/day</p> <p>General Toxicity Maternal: NOAEC: 750 ppm</p> <p>Developmental Toxicity: NOAEC: 750 ppm</p> <p>Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations.</p> <p>GLP: yes</p> |
| Reproductive toxicity - Assessment | Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments. |
| 64742-49-0: Reproductive toxicity - Assessment | Fertility classification not possible from current data. Embryotoxicity classification not possible from current data. |
| 64742-89-8: Reproductive toxicity - Assessment | Fertility classification not possible from current data. Embryotoxicity classification not possible from current data. |
| 68410-97-9: Reproductive toxicity - Assessment | Fertility classification not possible from current data. Embryotoxicity classification not possible from current data. |
| 67-64-1: Effects on fertility | <p>Species: rat, male</p> <p>Application Route: oral</p> <p>Dose: 0, 5000, 10000 mg/L</p> <p>Frequency of Treatment: 7 days/week</p> <p>General Toxicity - Parent: LOAEL: 10,000</p> <p>Fertility: 10,000</p> |
| Effects on foetal development | <p>Species: rat</p> <p>Application Route: Inhalation</p> <p>Dose: 0, 440, 2200, 11000 ppm</p> <p>Frequency of Treatment: 7 days/week</p> <p>General Toxicity Maternal: NOAEC: 2,200 ppm</p> <p>Teratogenicity: NOAEC: 11,000 ppm</p> <p>Embryo-foetal toxicity.: NOAEC: 2,200 ppm</p> <p>Method: OECD Test Guideline 414</p> <p>Result: No teratogenic potential.</p> <p>GLP: No data available</p> |
| Reproductive toxicity - Assessment | No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments. |
| 111-76-2: | |

Effects on fertility

Test Type: Two-generation study
Species: mouse
Application Route: oral
Fertility: NOAEL: 720 mg/kg body weight
Symptoms: Reduced fertility
Result: Reduced fertility at maternally toxic doses

Effects on foetal development

Test Type: Embryo-foetal development
Species: rat
Application Route: Inhalation
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
Developmental Toxicity: Lowest observed adverse effect level: 100 ppm
Result: Developmental toxicity occurred at maternal toxicity dose levels

Reproductive toxicity - Assessment

No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

1330-20-7:

Effects on fertility

Test Type: Two-generation study
Species: rat, male and female
Application Route: Inhalation
Dose: 0, 25, 100 and 500 ppm
Duration of Single Treatment: 6 h
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: > 500 ppm
General Toxicity F1: NOAEC: > 500 ppm
Early Embryonic Development: NOAEC: > 500 ppm
Result: No reproductive effects.

Effects on foetal development

Species: rat
Application Route: Inhalation
Dose: 0, 100, 500, 1000 or 2000 ppm
Duration of Single Treatment: 14 d
Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEC: 500 ppm
Teratogenicity: NOAEC: > 2,000
Developmental Toxicity: NOAEC: 100 ppm
Result: No teratogenic effects., Developmental toxicity occurred at maternal toxicity dose levels

Reproductive toxicity - Assessment

Animal testing did not show any effects on fertility. Damage to fetus not classifiable

67-56-1:

Effects on fertility

Test Type: Two-generation study
Species: rat, male and female
Application Route: Inhalation

| | |
|---|--|
| | <p>Dose: 0, 0.013, 0.13, 1.3 mg/L Duration of Single Treatment: 20 h General Toxicity - Parent: NOAEC: 1.3 mg/l General Toxicity F1: NOAEC: 0.13 mg/l Fertility: NOAEC: 1.3 mg/l Symptoms: Effects on postnatal development. Result: Animal testing did not show any effects on fertility.</p> |
| Effects on foetal development | <p>Species: rat Application Route: inhalation (vapour) Dose: 0, 6.65, 13.3, 26.6 mg/L Duration of Single Treatment: 20 d Frequency of Treatment: 7 hr/day General Toxicity Maternal: NOAEC: 13.3 mg/L Teratogenicity: NOAEC: 6.65 mg/L Result: Teratogenic effects.</p> |
| Reproductive toxicity - Assessment | <p>Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.</p> |
| <p>100-41-4: Effects on fertility</p> | <p>Test Type: One generation study Species: rat, male and female Application Route: Inhalation Dose: 0, 100, 500 and 1000 ppm Duration of Single Treatment: 6 h General Toxicity - Parent: NOAEC: 1,000 ppm General Toxicity F1: NOAEC: 100 ppm Symptoms: Reduced foetal weight. Reduced offspring weight gain. Method: OECD Test Guideline 415 Result: No reproductive effects. GLP: yes</p> |
| Effects on foetal development | <p>Species: rat Application Route: Inhalation Dose: 0, 100, 500, 1000, 2000 ppm Duration of Single Treatment: 15 d General Toxicity Maternal: NOAEC: 500 ppm Teratogenicity: NOAEC: 2,000 ppm Developmental Toxicity: NOAEC: 500 ppm Symptoms: Reduced body weight Method: OECD Test Guideline 414 Result: Developmental toxicity occurred at maternal toxicity dose levels GLP: No data available</p> |
| Reproductive toxicity - Assessment | <p>Fertility classification not possible from current data. Embryotoxicity classification not possible from current</p> |

data.

142-82-5:

Effects on fertility

Test Type: Two-generation study
Species: rat, male and female
Application Route: vapour
Dose: 0, 900, 3000, 9000 ppm
Frequency of Treatment: 5 days/week
General Toxicity - Parent: NOAEC: 3,000 ppm
General Toxicity F1: NOAEC: 3,000 ppm
Fertility: NOAEC: 9,000 ppm
Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.
Method: OECD Test Guideline 416
Result: No reproductive effects.
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Effects on foetal development

Species: mouse
Application Route: inhalation (vapour)
Dose: 0, 900, 3000, 9000 ppm
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEC: 900 ppm
Developmental Toxicity: NOAEC: 3,000 ppm
Symptoms: Skeletal malformations.
Method: OECD Test Guideline 414
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Reproductive toxicity - Assessment

Animal testing did not show any effects on fertility.
Embryotoxicity classification not possible from current data.

STOT - single exposure

Product:No data available

Components:

108-88-3:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|------------------------|--|----------|
| Inhalation | Central nervous system | May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic | |

| | |
|--|----------|
| | effects. |
|--|----------|

64742-49-0:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|------------------------|---|----------|
| Inhalation | Central nervous system | May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. | |

64742-89-8:No data available

68410-97-9:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|------------------------|---|----------|
| Inhalation | Central nervous system | May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. | |

67-64-1:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|------------------------|---|----------|
| Inhalation | Central nervous system | May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. | |

111-76-2:No data available

1330-20-7:

| Ex osure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|--------------------|-------------------|----------|
| Inhalation | Respiratory system | Ma cause res ira- | |

| | | |
|--|--|--|
| | | tory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. |
|--|--|--|

67-56-1:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|-------------------------|------------------------------|--|-----------------|
| | Eyes, Central nervous system | Causes damage to organs., The substance or mixture is classified as specific target organ toxicant, single exposure, category 1. | |

100-41-4:No data available

142-82-5:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|-------------------------|------------------------|--|-----------------|
| Inhalation | Central nervous system | May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects. | |

STOT - repeated exposure

Product:No data available

Components:

108-88-3:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|-------------------------|-----------------------|---|-----------------|
| Inhalation | Auditory system, Eyes | May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target | |

| | | |
|--|--|--|
| | | organ toxicant, repeated exposure, category 2. |
|--|--|--|

64742-49-0:No data available

64742-89-8:No data available

68410-97-9:No data available

67-64-1:No data available

111-76-2:No data available

1330-20-7:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|---------------------------------------|--|----------|
| | Liver, Kidney, Central nervous system | May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2. | |

67-56-1:No data available

100-41-4:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|------------------|-----------------|--|----------|
| | Auditory system | May cause damage to organs through prolonged or repeated exposure., The substance or | |

| | | |
|--|--|---|
| | | mixture is classified as specific target organ toxicant, repeated exposure, category 2. |
|--|--|---|

142-82-5:No data available

Repeated dose toxicity

Components:

108-88-3:

Species: rat, male and female
NOAEL: 300
Application Route: inhalation (vapour)
Exposure time: 6, 12, or 18 mths
Number of exposures: 6 h/d, 5 d/wk
Dose: 0, 30, 100, 300 ppm
Method: OECD Test Guideline 453

Repeated dose toxicity - : Causes skin irritation.
Assessment

64742-89-8:

Species: rat, male and female
NOAEL: 1402
Application Route: inhalation (vapour)
Test atmosphere: vapour
Exposure time: 13 weeks
Number of exposures: 6 hours/day, 5 days/week
Dose: 322, 1402, 9869 mg/m3
GLP: yes
Target Organs: Kidney
Symptoms: Nasal and ocular discharge

67-64-1:

Species: mouse, male
NOAEL: 20000
Application Route: Oral
Exposure time: 13 wk
Number of exposures: daily
Dose: 1250, 2500, 5000, 10000, 20000
Method: OECD Test Guideline 408
GLP: No data available

Species: mouse, female
NOAEL: 20000
LOAEL: 50000

Application Route: Oral
Exposure time: 13 wk
Number of exposures: daily
Dose: 2500, 5000, 10000, 20000, 5000
Method: OECD Test Guideline 408
GLP: No data available

Repeated dose toxicity - Assessment Causes mild skin irritation., Causes serious eye irritation.

111-76-2:

Species: rat
NOAEL: 30
Application Route: Inhalation
Exposure time: 14 wk
Number of exposures: 6 h/d, 5 d/wk

1330-20-7:

Species: rat, male and female
NOAEL: 250 mg/kg
Application Route: Oral
Exposure time: 103 wk
Number of exposures: 5 d/wk
Dose: 0, 250 or 500 mg/kg
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

67-56-1:

Species: mouse, male and female
NOAEL: 1.3 mg/l
Application Route: Inhalation
Exposure time: 12 mths
Number of exposures: Continuous
Dose: 0, 0.013, 0.13, 1.3 mg/L

100-41-4:

Species: rat, male and female
NOAEL: 75 mg/kg
Application Route: Oral
Exposure time: 28 d
Dose: 75, 250 and 750 mg/kg bw/day
Method: OECD Test Guideline 407
GLP: yes
Symptoms: Increased kidney and liver weights

142-82-5:

Species: rat, male
NOAEL: 12470 mg/m³
Application Route: inhalation (vapour)
Exposure time: 16 wks

Number of exposures: 12 h/d, 7 d/wk
Dose: 0, 12470 mg/3

Repeated dose toxicity - Causes skin irritation.
Assessment

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

Components:

108-88-3:

Aspiration Toxicity - Category 1

64742-49-0:

May be fatal if swallowed and enters airways.

64742-89-8:

May be fatal if swallowed and enters airways.

68410-97-9:

May be fatal if swallowed and enters airways.

111-76-2:

No aspiration toxicity classification

1330-20-7:

May be fatal if swallowed and enters airways.

100-41-4:

May be fatal if swallowed and enters airways.

142-82-5:

Aspiration Toxicity - Category 1

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

108-88-3:

| | |
|------------------|---|
| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l Exposure time: 96 h Test Type: flow-through test |
|------------------|---|

| | |
|---|---|
| Toxicity to daphnia and other aquatic invertebrates | EC50 (Ceriodaphnia dubia): 3.78 mg/l Exposure time: 48 h Test Type: Renewal |
|---|---|

| | |
|-------------------|---|
| Toxicity to algae | EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l Exposure time: 3 h Test Type: static test |
|-------------------|---|

| | |
|----------------------|--|
| Toxicity to bacteria | IC50 (Bacteria): 84 mg/l Exposure time: 24 h Test Type: Static |
|----------------------|--|

| | |
|--|------------------------|
| Ecotoxicology Assessment Acute aquatic toxicity | Toxic to aquatic life. |
|--|------------------------|

| | |
|--------------------------|--|
| Chronic aquatic toxicity | Toxic to aquatic life with long lasting effects. |
|--------------------------|--|

64742-49-0:

| | |
|------------------|--|
| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l Exposure time: 96 h |
|------------------|--|

| | |
|---|--|
| Toxicity to daphnia and other aquatic invertebrates | EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h |
|---|--|

| | |
|-------------------|--|
| Toxicity to algae | EC50 (Pseudokirchneriella subcapitata (green algae)): 3.71 mg/l Exposure time: 96 h |
|-------------------|--|

| | |
|--|------------------------|
| Ecotoxicology Assessment Acute aquatic toxicity | Toxic to aquatic life. |
|--|------------------------|

| | |
|--------------------------|--|
| Chronic aquatic toxicity | Toxic to aquatic life with long lasting effects. |
|--------------------------|--|

64742-89-8:

| | |
|------------------|--|
| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)): 8.2 mg/l |
|------------------|--|

| | |
|---|---|
| | Exposure time: 96 h Test Type: semi-static test |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 4.5 mg/l Exposure time: 48 h Test Type: Immobilization Analytical monitoring: yes |
| Toxicity to algae | EC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 3.7 mg/l Exposure time: 96 h Test Type: static test |
| Ecotoxicology Assessment Acute aquatic toxicity | Toxic to aquatic life. |
| Chronic aquatic toxicity | Toxic to aquatic life with long lasting effects. |
| 68410-97-9: | |
| Toxicity to fish | LC50 (<i>Pimephales promelas</i> (fathead minnow)): 8.2 mg/l Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 4.5 mg/l Exposure time: 48 h |
| Toxicity to algae | EC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 3.1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 |
| Ecotoxicology Assessment Acute aquatic toxicity | Toxic to aquatic life. |
| Chronic aquatic toxicity | Toxic to aquatic life with long lasting effects. |
| 67-64-1: | |
| Toxicity to fish | LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 6,100 mg/l Exposure time: 48 h |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 7,630 mg/l Exposure time: 48 h Test substance: Acetone |
| Toxicity to algae | Remarks: No data available |
| 111-76-2: | |
| Toxicity to fish | LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 1,474 |

| | |
|---|---|
| | mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: no |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 1,800 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: no |
| Toxicity to algae | EC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): 911 mg/l End point: Biomass Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: no |
| 1330-20-7: | |
| Toxicity to fish | LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 2.6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 1 mg/l Exposure time: 24 h Test Type: static test Method: OECD Test Guideline 202 |
| Toxicity to algae | EC50 (<i>Pseudokirchneriella subcapitata</i>): 4.36 mg/l End point: Growth rate Exposure time: 73 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes |
| Ecotoxicology Assessment | |
| Acute aquatic toxicity | Toxic to aquatic life. |
| Chronic aquatic toxicity | Toxic to aquatic life with long lasting effects. |
| 67-56-1: | |
| Toxicity to fish | LC50 (<i>Lepomis macrochirus</i> (Bluegill sunfish)): 15,400 mg/l Exposure time: 96 h Test Type: flow-through test |

| | |
|---|---|
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): > 10,000 mg/l Exposure time: 48 h Test Type: static test |
| Toxicity to algae | EC50 (<i>Scenedesmus capricornutum</i> (fresh water algae)): 22,000 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201 |
| Toxicity to bacteria | IC50 (activated sludge): > 1,000 mg/l End point: Growth rate Exposure time: 3 h Test Type: Static Method: OECD Test Guideline 209 |

100-41-4:

| | |
|---|--|
| Toxicity to fish | LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 4.2 mg/l Exposure time: 96 h Test Type: semi-static test |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 1.8 mg/l Exposure time: 48 h Test Type: static test |
| Toxicity to algae | EC50 (<i>Pseudokirchneriella subcapitata</i>): 5.4 mg/l Exposure time: 72 h Test Type: static test |
| Toxicity to bacteria | Remarks: No data available |

Ecotoxicology Assessment **Acute aquatic toxicity**

Toxic to aquatic life.

Chronic aquatic toxicity

Toxic to aquatic life with long lasting effects.

142-82-5:

| | |
|---|---|
| Toxicity to fish | LC50 (<i>Carassius auratus</i> (goldfish)): 4 mg/l Exposure time: 24 h Remarks: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (<i>Daphnia magna</i> (Water flea)): 1.5 mg/l Exposure time: 48 h Test Type: static test Remarks: Very toxic to aquatic organisms. |

| | |
|--------------------------|---|
| Toxicity to algae | Remarks: No data available |
| Ecotoxicology Assessment | |
| Acute aquatic toxicity | Very toxic to aquatic life. |
| Chronic aquatic toxicity | Very toxic to aquatic life with long lasting effects. |

Persistence and degradability

Components:

108-88-3:

| | |
|------------------|---|
| Biodegradability | Inoculum: Sewage Biodegradation: 100 % Remarks: Readily biodegradable |
|------------------|---|

64742-49-0:

| | |
|------------------|---|
| Biodegradability | aerobic Inoculum: activated sludge Concentration: 20 mg/l Biodegradation: 74.30 % Exposure time: 56 d GLP: yes Remarks: Inherently biodegradable. |
|------------------|---|

64742-89-8:

| | |
|------------------|--|
| Biodegradability | Concentration: 49.2 mg/l Result: Readily biodegradable. Biodegradation: 77 % Testing period: 2 d Exposure time: 28 d GLP: yes |
|------------------|--|

67-64-1:

| | |
|------------------|--------------------------------|
| Biodegradability | Remarks: Readily biodegradable |
|------------------|--------------------------------|

111-76-2:

| | |
|------------------|---|
| Biodegradability | aerobic Inoculum: Activated sludge, domestic, adaption not specified Result: Readily biodegradable. Biodegradation: 90.4 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: no |
|------------------|---|

1330-20-7:

| | |
|------------------|--|
| Biodegradability | Inoculum: activated sludge Result: Readily biodegradable. |
|------------------|--|

| | |
|--|--|
| | Biodegradation: 72 % Exposure time: 20 d |
| 67-56-1: | |
| Biodegradability | aerobic Result: Readily biodegradable. Biodegradation: 72 % Remarks: Readily biodegradable |
| Biochemical Oxygen Demand (BOD) | 600 - 1,120 mg/g |
| Chemical Oxygen Demand (COD) | 1,420 mg/g |
| BOD/COD | BOD: 600 - 1120COD: 1420 |
| Stability in water | Hydrolysis: 91 % at 19 °C (72 h) Remarks: Hydrolyses on contact with water. Hydrolyses readily. |
| 100-41-4: | |
| Biodegradability | Inoculum: activated sludge Concentration: 22 mg/l Result: Readily biodegradable. Biodegradation: 70 % Exposure time: 28 d GLP: yes |
| 142-82-5: | |
| Biodegradability | Primary biodegradation Inoculum: activated sludge Concentration: 100 mg/l Biodegradation: 100 % Testing period: 2 d Exposure time: 25 d Remarks: Readily biodegradable |
| Bioaccumulative potential | |
| <u>Components:</u> | |
| 108-88-3: | |
| Partition coefficient: n-octanol/water | log Pow: 2.73 |
| 64742-49-0: | |
| Partition coefficient: n-octanol/water | Remarks: No data available |

64742-89-8:

Partition coefficient: n-octanol/water

log Pow: 2.13 - 4.85 (25 °C)

67-64-1:

Partition coefficient: n-octanol/water

log Pow: -0.24

111-76-2:

Partition coefficient: n-octanol/water

log Pow: 0.83

1330-20-7:

Partition coefficient: n-octanol/water

log Pow: 2.77 - 3.15

67-56-1:

Bioaccumulation

Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 1.0

Exposure time: 72 d

Temperature: 20 °C

Concentration: 5 mg/l

Remarks: This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Partition coefficient: n-octanol/water

log Pow: -0.77

100-41-4:

Partition coefficient: n-octanol/water

log Pow: 2.92

Mobility in soil

No data available

Other adverse effects**Product:**

Regulation

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

Components:

100-41-4:

Results of PBT and vPvB assessment

This substance is not considered to be persistent, bio-accumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging

Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): UN1263, PAINT RELATED MATERIAL, 3, II, Flash Point:-20 °C(-4 °F)

IMDG (International Maritime Dangerous Goods): UN1263, PAINT RELATED MATERIAL, 3, II

DOT (Department of Transportation): UN1263, PAINT RELATED MATERIAL, 3, II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards

Flammable liquid, Carcinogen, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Moderate skin irritant, Moderate eye irritant, Moderate respiratory irritant, Teratogen, Reproductive hazard, Mutagen

WHMIS Classification

B2: Flammable liquid
D1A: Very Toxic Material Causing Immediate and Serious Toxic Effects

D1B: Toxic Material Causing Immediate and Serious
Toxic Effects
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---------------|-----------|-----------------------|--------------------------------|
| Mixed xylenes | 1330-20-7 | 100 | 1859 |

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

Fire Hazard
Chronic Health Hazard
Acute Health Hazard

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

| | | |
|----------|-----------------|-----------|
| 108-88-3 | Toluene | 38.7177 % |
| 67-56-1 | Methanol | 2.9356 % |
| 100-41-4 | Ethylbenzene | 1.6696 % |
| 107-21-1 | Ethylene glycol | 0.089 % |
| 71-43-2 | Benzene | 0.0679 % |
| 110-54-3 | Hexane | 0.0056 % |
| 91-20-3 | Naphthalene | 0.0005 % |
| 98-82-8 | Cumene | 0.0001 % |

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

| | | |
|-----------|------------------|-----------|
| 108-88-3 | Toluene | 38.7177 % |
| 67-64-1 | Acetone | 15.6238 % |
| 111-76-2 | 2-Butoxy ethanol | 8.9142 % |
| 1330-20-7 | Mixed xylenes | 5.3787 % |
| 67-56-1 | Methanol | 2.9356 % |
| 100-41-4 | Ethylbenzene | 1.6696 % |
| 110-82-7 | Cyclohexane | 0.7124 % |
| 107-21-1 | Ethylene glycol | 0.089 % |
| 71-43-2 | Benzene | 0.0679 % |
| 98-82-8 | Cumene | 0.0001 % |

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

| | | |
|----------|---------|-----------|
| 108-88-3 | Toluene | 38.7177 % |
|----------|---------|-----------|

| | | |
|-----------|---------------|----------|
| 1330-20-7 | Mixed xylenes | 5.3787 % |
| 100-41-4 | Ethylbenzene | 1.6696 % |
| 110-82-7 | Cyclohexane | 0.7124 % |
| 71-43-2 | Benzene | 0.0679 % |
| 91-20-3 | Naphthalene | 0.0005 % |

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| | | |
|-----------|---------------|-----------|
| 108-88-3 | Toluene | 38.7177 % |
| 1330-20-7 | Mixed xylenes | 5.3787 % |
| 100-41-4 | Ethylbenzene | 1.6696 % |
| 110-82-7 | Cyclohexane | 0.7124 % |
| 71-43-2 | Benzene | 0.0679 % |
| 91-20-3 | Naphthalene | 0.0005 % |

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

| | | |
|----------|--------------|-----------|
| 108-88-3 | Toluene | 38.7177 % |
| 100-41-4 | Ethylbenzene | 1.6696 % |

US State Regulations

Massachusetts Right To Know

| | | |
|-----------|------------------|-----------|
| 108-88-3 | Toluene | 30 - 50 % |
| 67-64-1 | Acetone | 10 - 20 % |
| 111-76-2 | 2-Butoxy ethanol | 5 - 10 % |
| 1330-20-7 | Mixed xylenes | 5 - 10 % |
| 67-56-1 | Methanol | 1 - 5 % |
| 100-41-4 | Ethylbenzene | 1 - 5 % |
| 71-43-2 | Benzene | 0 - 0.1 % |

Pennsylvania Right To Know

| | | |
|------------|--|-----------|
| 108-88-3 | Toluene | 30 - 50 % |
| 64742-49-0 | Naphtha (pet), hydrotreated It | 0 - 30 % |
| 64742-89-8 | Solvent naphtha (pet), It aliph. | 0 - 30 % |
| 68410-97-9 | Distillates, pet, It dist hydrotreat process, low-boil | 0 - 30 % |
| 67-64-1 | Acetone | 10 - 20 % |
| 111-76-2 | 2-Butoxy ethanol | 5 - 10 % |
| 1330-20-7 | Mixed xylenes | 5 - 10 % |
| 67-56-1 | Methanol | 1 - 5 % |
| 100-41-4 | Ethylbenzene | 1 - 5 % |
| 110-82-7 | Cyclohexane | 0.1 - 1 % |
| 107-21-1 | Ethylene glycol | 0 - 0.1 % |
| 71-43-2 | Benzene | 0 - 0.1 % |

New Jersey Right To Know

| | | |
|------------|----------------------------------|-----------|
| 108-88-3 | Toluene | 30 - 50 % |
| 64742-49-0 | Naphtha (pet), hydrotreated It | 0 - 30 % |
| 64742-89-8 | Solvent naphtha (pet), It aliph. | 0 - 30 % |

| | | |
|------------|--|-----------|
| 68410-97-9 | Distillates, pet, lt dist hydrotreat process, low-boil | 0 - 30 % |
| 67-64-1 | Acetone | 10 - 20 % |
| 111-76-2 | 2-Butoxy ethanol | 5 - 10 % |
| 1330-20-7 | Mixed xylenes | 5 - 10 % |
| 67-56-1 | Methanol | 1 - 5 % |
| 100-41-4 | Ethylbenzene | 1 - 5 % |

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

| | |
|----------|--------------|
| 100-41-4 | Ethylbenzene |
| 71-43-2 | Benzene |
| 91-20-3 | Naphthalene |
| 98-82-8 | Cumene |

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

| | |
|----------|----------|
| 108-88-3 | Toluene |
| 67-56-1 | Methanol |
| 71-43-2 | Benzene |

The components of this product are reported in the following inventories:

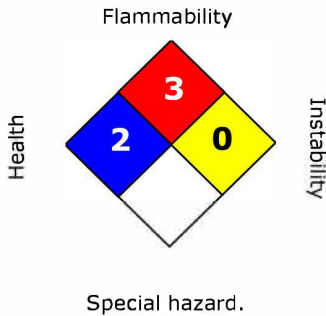
| | |
|---|---|
| Switzerland. New notified substances and declared preparations | y (positive listing) (The formulation contains substances listed on the Swiss Inventory) |
| United States TSCA Inventory | y (positive listing) (On TSCA Inventory) |
| Canadian Domestic Substances List (DSL) | y (positive listing) (All components of this product are on the Canadian DSL.) |
| Australia Inventory of Chemical Substances (AICS) | y (positive listing) (On the inventory, or in compliance with the inventory) |
| New Zealand. Inventory of Chemical Substances | n (Negative listing) (Not in compliance with the inventory) |
| Japan. ENCS - Existing and New Chemical Substances Inventory | n (Negative listing) (Not in compliance with the inventory) |

| | |
|---|---|
| Japan. ISHL - Inventory of Chemical Substances (METI) | n (Negative listing) (Not in compliance with the inventory) |
| Korea. Korean Existing Chemicals Inventory (KECI) | y (positive listing) (On the inventory, or in compliance with the inventory) |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | y (positive listing) (On the inventory, or in compliance with the inventory) |
| China. Inventory of Existing Chemical Substances in China (IECSC) | y (positive listing) (On the inventory, or in compliance with the inventory) |

SECTION 16. OTHER INFORMATION

Version 2.0
Revision Date 06/20/2019

NFPA:



HMIS III:

| | |
|------------------------|-----------|
| HEALTH | 2* |
| FLAMMABILITY | 3 |
| PHYSICAL HAZARD | 0 |

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 =Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Legacy MSDS:

000000083804

Material number:

616863, 616766

| Key or legend to abbreviations and acronyms used in the safety data sheet | | | |
|--|--|-------|--|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AICS | Australia, Inventory of Chemical Substances | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances List | NFPA | National Fire Protection Agency |
| NDSL | Canada, Non-Domestic Substances List | NIOSH | National Institute for Occupational Safety & Health |
| CNS | Central Nervous System | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service | NZIoC | New Zealand Inventory of Chemicals |
| EC50 | Effective Concentration | NOAEL | No Observable Adverse Effect Level |
| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and New Chemical Substances | TSCA | Toxic Substance Control Act |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | | | Lethal Concentration 50% |