# Safety Data Sheet

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier** Medium Acrylic Enamel Reducer

**Product code** 152

**Manufacturer/Importer/Supplier/Distributor information Manufacturer**

**Company name**
**Address**
PBE Jobbers Warehouse
2921 Syene Rd
Madison, WI 53713

**Telephone** 608-274-8797

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

## 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 IB

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

Specific target organ tox- : Category 1 (Eyes, Central nervous system) icity - single exposure

Specific target organ tox- : Category 3 (Central nervous system) icity - single exposure

Specific target organ tox- : Category 2 (Liver, Kidney, Central nervous system, Au-

icity - repeated exposure ditory 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 lt |
| 64742-89-8 | Solvent naphtha (pet), lt |

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 ofToluene and Benzene may also be present as impurities.

## SECTION 4. FIRST AID MEASURES

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

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (C02)
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 firefighting if necessary.

**NFPA Flammable and Combustible Liquids Classification**
Flammable Liquid Class IB

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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 noncombustible 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

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<br>375 mg/m3 | NIOSH REL |
| | | ST | 150 ppm<br>560 mg/m3 | NIOSH REL |
| | | TWA | 200 ppm | OSHA Z-2 |
| | | CEIL | 300 ppm | OSHA Z-2 |
| | | Peak | 500 ppm | OSHA Z-2 |
| | | TWA | 100 ppm<br>375 mg/m3 | OSHA P0 |
| | | STEL | 150 ppm<br>560 mg/m3 | OSHA P0 |
| 64742-49-0 | Naphtha (pet), hydrotreated lt | TWA | 500 ppm<br>2,000 mg/m3 | OSHA Z-l |
| | | TWA | 400 ppm<br>1,600 mg/m3 | OSHA P0 |
| 64742-89-8 | Solvent naphtha (pet), lt aliph. | TWA | 500 ppm<br>2,000 mg/m3 | OSHA Z-l |

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

| | | | | |
|---|---|---|---|---|
| | | C | 440 ppm<br>1,800 mg/m3 | NIOSH REL |
| | | TWA | 500 ppm<br>2,000 mg/m3 | OSHA Z-l |
| | | TWA | 400 ppm<br>1,600 mg/m3 | OSHA P0 |
| | | STEL | 500 ppm<br>2,000 mg/m3 | OSHA P0 |

**Biological occupational exposure limits**

| Components | CAS-No. | Control parame - ters | Biological specimen | Sam pling time | Permissible concentration | Basis |
|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | Toluene | In blood | Prior to last shift of workweek | 0.02 mg/l | ACGIH BEI |
| | | Toluene | Urine | End of shift (As soon as possible after exposure ceases) | 0.03 mg/l | ACGIH BEI |
| | | o-Cresol | Urine | End of shift (As soon as possible after exposure ceases) | 0.3 mg/g Creatinine | ACGIH BEI |
| Acetone | 67-64-1 | Acetone | Urine | End of shift (As soon as possible after exposure ceases) | 50 mg/l | ACGIH BEI |
| 2-Butoxy ethanol | 111-76-2 | Butoxya-cetic acid (BAA) | Urine | End of shift (As soon as possible | 200 mg/g Creatinine | ACGIH BEI |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | after expo sure 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 workweek | 0.7 g/g creatinine | ACGI H BEI |

Gastro intestinal illness caused by benzene, toluene, xylene and a l 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 : No personal respiratory protective equipment normally req u i red.
In the case of vapour formation use a respirator with an approved filter.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance | : liguid |
| 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)<br>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 solvents | : No data available |
| Partition coefficient: n-octanol/water | : No data available |
| Auto-ignition temperature | : No data available |

Thermal decomposition : No data available

## SECTION 10. STABILITY AND REACTIVITY

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;**

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

| | |
|---|---|
| Acute inhalation toxicity | : Acute toxicity estimate : 13608 ppm<br>Exposure time: 4 h<br>Test atmosphere: gas<br>Method: Calculation method |
| Acute dermal toxicity | : Acute toxicity estimate : 4,586 mg/kg<br>Method: Calculation method |

**ComDonents:**
**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<br>Test atmosphere: vapour<br>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<br>GLP: yes |
| Acute inhalation toxicity | : Remarks: No data available |
| Acute dermal toxicity | : LD50 (rabbit, male and female): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>GLP: yes |

**64742-89-8:**

| | |
|---|---|
| Acute oral toxicity | : LD50 (rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401<br>GLP: yes |
| Acute inhalation toxicity | : Remarks: No data available |
| Acute dermal toxicity | : LD50 (rabbit, male and female): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>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.l (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:**

| | |
|---|---|
| Acute inhalation toxicity | : LC50 (Mouse, Male): 10 mg/l<br>Exposure time: 4 h<br>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<br>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<br>Method: OECD Test Guideline 402 GLP: yes<br>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: BuehlerTest Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

**64742-89-8:**
Test Type: BuehlerTest 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<br>Test species: Chinese hamster ovary (CHO)<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| Genotoxicity in vivo | : Test Type: In vivo micronucleus test<br>Test species: mouse (male)<br>Application Route: Intraperitoneal<br>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<br>Test species: Chinese hamster ovary (CHO)<br>Metabolic activation: with and without metabolic activation<br>Method: Mutagenicity (in vitro mammalian cytogenetic test)<br>Result: negative |
| | : Test Type: Sister chromatid exchange assay in mammalian cells<br>Test species: Chinese hamster ovary (CHO)<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| Genotoxicity in vivo | : Test Type: Dominant lethal assay<br>Test species: mouse<br>Application Route: Subcutaneous<br>Exposure time: 8 wk<br>Dose: 1.0 mL/kg<br>Method: OECD Test Guideline 478<br>Result: negative<br>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<br>Metabolic activation: with and without metabolic activation<br>Result: Ambiguous |

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

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 FI: 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

Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEC: 750 ppm Developmental Toxicity: NOAEC: 750 ppm
Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations.
GLP: yes

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

: Species: rat, male
Application Route: oral
Dose: 0, 5000, 10000 mg/L
Frequency of Treatment: 7 days/week
General Toxicity - Parent: LOAEL: 10,000
Fertility: 10,000

Effects on foetal development : Species: rat
Application Route: Inhalation
Dose: 0, 440, 2200, 11000 ppm
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEC: 2,200 ppm
Teratogenicity: NOAEC: 11,000 ppm
Embryo-foetal toxicity.: NOAEC: 2,200 ppm
Method: OECD Test Guideline 414
Result: No teratogenic potential.
GLP: No data available

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<br>Species: mouse<br>Application Route: oral<br>Fertility: NOAEL: 720 mg/kg body weight<br>Symptoms: Reduced fertility<br>Result: Reduced fertility at maternally toxic doses |
| Effects on foetal development | : Test Type: Embryo-foetal development<br>Species: rat<br>Application Route: Inhalation<br>Duration of Single Treatment: 10 d<br>Frequency of Treatment: 6 hr/day<br>Developmental Toxicity: Lowest observed adverse effect level: 100 ppm<br>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<br>Species: rat, male and female<br>Application Route: Inhalation<br>Dose: 0, 25, 100 and 500 ppm<br>Duration of Single Treatment: 6 h<br>Frequency of Treatment: 7 days/week<br>General Toxicity - Parent: NOAEC: > 500 ppm<br>General Toxicity FI: NOAEC: > 500 ppm<br>Early Embryonic Development: NOAEC: > 500 ppm Result: No reproductive effects. |
| Effects on foetal development | : Species: rat<br>Application Route: Inhalation<br>Dose: 0, 100, 500, 1000 or 2000 ppm<br>Duration of Single Treatment: 14 d<br>Frequency of Treatment: 6 hr/day<br>General Toxicity Maternal: NOAEC: 500 ppm Teratogenicity: NOAEC: > 2,000<br>Developmental Toxicity: NOAEC: 100 ppm<br>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<br>Species: rat, male and female<br>Application Route: Inhalation |

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 FI: 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.

Effects on foetal development

: 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.

Reproductive toxicity - Assessment

: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

**100-41-4:**
Effects on fertility

: 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 FI: NOAEC: 100 ppm
Symptoms: Reduced foetal weight. Reduced offspring weight gain.
Method: OECD Test Guideline 415
Result: No reproductive effects.
GLP: yes

Effects on foetal development

: 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

Reproductive toxicity - Assessment

: Fertility classification not possible from current data. Embryotoxicity classification not possible from current

data.

**142-82-5:**

| | |
|---|---|
| Effects on fertility | Test Type: Two-generation study Species: rat, male and female<br>Application Route: vapour Dose: 0, 900, 3000, 9000 ppm<br>Frequency of Treatment: 5 days/week General Toxicity - Parent: NOAEC: 3,000 ppm General Toxicity FI: NOAEC: 3,000 ppm<br>Fertility: NOAEC: 9,000 ppm<br>Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.<br>Method: OECD Test Guideline 416 Result: No reproductive effects.<br>GLP: yes<br>Remarks: Information given is based on data obtained from similar substances. |
| Effects on foetal development | Species: mouse<br>Application Route: inhalation (vapour)<br>Dose: 0, 900, 3000, 9000 ppm Duration of Single Treatment: 10 d<br>Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 900 ppm Developmental Toxicity: NOAEC: 3,000 ppm<br>Symptoms: Skeletal malformations.<br>Method: OECD Test Guideline 414 GLP: yes<br>Remarks: Information given is based on data obtained from similar substances. |

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. | |

lll-76-2:No data available

1330-20-7:

| Exposure routes: | Target Organs: | Assessment: | Remarks: |
|---|---|---|---|
| Inhalation | Respiratory system | May cause respira- | |

| | | | |
|---|---|---|---|
| | | 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

**ComDonents:**
**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-l:No data available lll-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, re-peated exposure, category 2. | |

67-56-l: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 - Assessment : Causes skin irritation.

**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 - Assessment : Causes skin irritation.

**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<br>Exposure time: 96 h<br>Test Type: flow-through test |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Ceriodaphnia dubia): 3.78 mg/l<br>Exposure time: 48 h<br>Test Type: Renewal |
| Toxicity to algae | : EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l<br>Exposure time: 3 h<br>Test Type: static test |
| Toxicity to bacteria | : IC50 (Bacteria): 84 mg/l<br>Exposure time: 24 h<br>Test Type: Static |
| Ecotoxicology Assessment<br>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<br>Exposure time: 48 h |
| Toxicity to algae | : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.71 mg/l<br>Exposure time: 96 h |
| Ecotoxicology Assessment<br>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<br>Test Type: semi-static test |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h<br>Test Type: Immobilization<br>Analytical monitoring: yes |
| Toxicity to algae | : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.7 mg/l<br>Exposure time: 96 h<br>Test Type: static test |
| Ecotoxicology Assessment<br>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 (Pimephales promelas (fathead minnow)): 8.2 mg/l<br>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)): 3.1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Ecotoxicology Assessment<br>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 (Oncorhynchus mykiss (rainbow trout)): 6,100 mg/l<br>Exposure time: 48 h |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 7,630 mg/l Exposure time: 48 h<br>Test substance: Acetone |
| Toxicity to algae | : Remarks: No data available |

**111-76-2:**

| | |
|---|---|
| Toxicity to fish | : LC50 (Oncorhynchus mykiss (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 (Daphnia magna (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 (Pseudokirchneriella subcapitata (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 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 mg/l
Exposure time: 24 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata): 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 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l
Exposure time: 96 h
Test Type: flow-through test

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

**100-41-4:**

| | |
|---|---|
| Toxicity to fish | : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l<br>Exposure time: 96 h<br>Test Type: semi-static test |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 1.8 mg/l Exposure time: 48 h<br>Test Type: static test |
| Toxicity to algae | : EC50 (Pseudokirchneriella subcapitata): 5.4 mg/l Exposure time: 72 h<br>Test Type: static test |
| Toxicity to bacteria | : Remarks: No data available |
| Ecotoxicology Assessment<br>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 (Carassius auratus (goldfish)): 4 mg/l<br>Exposure time: 24 h<br>Remarks: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 1.5 mg/l Exposure time: 48 h<br>Test Type: static test<br>Remarks: Very toxic to aquatic organisms. |

Toxicity to algae : Remarks: No data available

Ecotoxicology Assessment
Acute aguatic toxicity : Very toxic to aguatic life.

Chronic aguatic toxicity : Very toxic to aguatic 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 % atl9 °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**

**Components:**

**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

Remarks

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
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 aguatic 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.<br>For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922. |
| Contaminated packaging | : Empty remaining contents.<br>Dispose of as unused product.<br>Do not re-use empty containers.<br>Do not burn, or use a cutting torch on, the empty drum. |

## SECTION 14. TRANSPORT INFORMATION

**I AT A (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<br>D1A: Very Toxic Material Causing Immediate and Serious Toxic Effects |

DIB: 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 SOCMI 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 ■ |
| 111-76-2 | 2-Butoxy ethanol | 5 - 0 % **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), Italiph. | 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), Italiph. | 0 - 30 % |

| | | |
|---|---|---|
| 68410-97-9 | Distillates, pet,It dist hydrotreat process, low-boil | 0 - 3 0 % |
| 67-64-1 | Acetone | 10 - 20 % |
| 111-76-2 | 2-Butoxy ethanol | 5 - 1 0 % |
| 1330-20-7 | Mixed xylenes | 5 - 1 0 % |
| 67-56-1 | Methanol | 1 - 5 % |
| 100-41-4 | Ethylbenzene | |

**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.

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

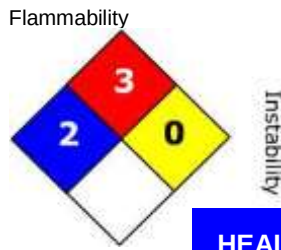
**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| **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 1**

**HMIS III:**




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

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

**6. OTHER INFORMATION Further information NFPA:**

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 suita-ble to their circumstances.

**Legecy MSDS:** 000000083804

**Material number:**
616863,616766

| **Key or le?** | **lend to abbreviations and acronyms used** | | **in the safety datasheet** |
|---|---|---|---|
| ACGIH | American Conference of Gov-ernment 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 Admin-istration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philipines 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 Egual To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reau-thorization 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 Compositon, Complex Reaction Products, and Biological Materials |
| < = | Less Than or Egual To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | | Lethal Concentration 50% | |