

Safety Data Sheet



LCB185 CATALIZZATORE per PU - Catalyst for PU

Safety Data Sheet dated 4/3/2018, version 1

1. Identification

GHS Product identifier
Mixture identification:
Trade name: CATALIZZATORE per PU - Catalyst for PU
Other means of identification
Trade code: LCB185

Recommended use and restrictions on use
Recommended use:
Industrial and professional uses (SU3 - SU22)
Catalyst for paints and varnishes

Supplier's details
Company:
NUOVA S.I.V.A.M. SpA - Via Monviso, 10 - 20010 BAREGGIO (MI) - Tel. +39 02 90304.1
Importer:
Quincaillerie Richelieu Ltée/Richelieu Hardware Ltd.
7900 Henri-Bourassa Blvd. W.
Montreal, Quebec, Canada, H4S 1V4
Tel :+1-514-832-4010
Emergency phone number for Canada: Canutec (613) 996-6666
Distributor:
Quincaillerie Richelieu Ltée/Richelieu Hardware Ltd.
7900 Henri-Bourassa Blvd. W.
Montreal, Quebec, Canada, H4S 1V4
Tel :+1-514-832-4010
Emergency phone number for Canada: Canutec (613) 996-6666

Competent person responsible for the safety data sheet:
msds@sivam.it

Emergency phone number
NUOVA S.I.V.A.M. SpA - Tel. +39 02 90304.1 (Monday - Friday 8.00 - 15.00)
Poison Centre - Ospedale di Niguarda - Milan - Tel. +39 02 66101029 (24 h)

2. Hazard identification

Classification of the hazardous product

- ⚠ Danger, Flam. Liq. 2, Highly flammable liquid and vapour.
- ⚠ Warning, Skin Irrit. 2, Causes skin irritation.
- ⚠ Warning, Eye Irrit. 2A, Causes serious eye irritation.
- ⚠ Danger, Resp. Sens. 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- ⚠ Warning, Carc. 2, Suspected of causing cancer.
- ⚠ Warning, Repr. 2, Suspected of damaging fertility or the unborn child.
- ⚠ Warning, STOT SE 3, May cause drowsiness or dizziness.
- ⚠ Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.
- ⚠ Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.

GHS label elements, including precautionary statements
Hazard pictograms:



Danger
Hazard statements:
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

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Precautionary statements:

- 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.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash ... Thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
 P302+P352 IF ON SKIN: Wash with plenty of water/...
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P312 Call a POISON CENTER/ doctor/if you feel unwell.
 P314 Get medical advice/attention if you feel unwell.
 P321 Specific treatment (see ... On this label).
 P331 Do NOT induce vomiting.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire, use alcohol resistant foam, dry chemical, CO₂, water spray. Do not use water jet.
 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.
 P501 Dispose of contents/container in accordance with applicable regulations.

Special provisions

None

Other hazards

None

Ingredient(s) with unknown acute toxicity

None.

3. Composition/Information on ingredients

Substances

N.A.

Mixtures

Hazardous components within the meaning of WHMIS 2015 and related classification:

| Qty | Name | Ident. Number | Classification |
|----------------|-----------------|---|---|
| >= 25% - < 30% | ethyl acetate | Index number: 607-022-00-5 CAS: 141-78-6 EC: 205-500-4 REACH No.: 01-2119475103-46 | ⚠ B.6/2 Flam. Liq. 2 H225 ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ A.8/3 STOT SE 3 H336 |
| >= 20% - < 25% | toluene | Index number: 601-021-00-3 CAS: 108-88-3 EC: 203-625-9 REACH No.: 01-2119471310-51 | ⚠ B.6/2 Flam. Liq. 2 H225 ⚠ A.10/1 Asp. Tox. 1 H304 ⚠ A.2/2 Skin Irrit. 2 H315 ⚠ A.7/2 Unst. Expl. ⚠ A.8/3 STOT SE 3 H336 ⚠ A.9/2 STOT RE 2 H373 |
| >= 15% - < 20% | n-butyl acetate | Index number: 607-025-00-1 CAS: 123-86-4 EC: 204-658-1 REACH No.: 01-2119485493- | ⚠ B.6/3 Flam. Liq. 3 H226 ⚠ A.8/3 STOT SE 3 H336 |

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|------------------|---|--|---|--|
| >= 15% - < 20% | Aromatic polyisocyanate CAS 9017-01-0 | CAS: | 9017-01-0 | ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ A.4.2/1 Skin Sens. 1 H317 |
| >= 7% - < 10% | isobutyl acetate [2] | Index number: CAS: EC: REACH No.: | 607-026-00-7 110-19-0 203-745-1 01-2119488971-22 | ⚠ B.6/2 Flam. Liq. 2 H225 ⚠ A.8/3 STOT SE 3 H336 |
| >= 5% - < 7% | Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidene-trimethanol | CAS: EC: | 53317-61-6 500-120-8 | ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ A.4.2/1 Skin Sens. 1 H317 |
| >= 3% - < 5% | 4-methylpentan-2-one; isobutyl methyl ketone | Index number: CAS: EC: REACH No.: | 606-004-00-4 108-10-1 203-550-1 01-2119473980-30 | ⚠ B.6/2 Flam. Liq. 2 H225 ⚠ A.8/3 STOT SE 3 H335 ⚠ A.1/4/Inhal Acute Tox. 4 H332 |
| >= 0.1% - < 0.3% | 2-methyl-m-phenylene diisocyanate; toluene-2,4-diisocyanate; | Index number: CAS: EC: REACH No.: | 615-006-00-4 26471-62-5 247-722-4 01-2119454791-34 | ⚠ A.6/2 Carc. 2 H351 ⚠ A.8/3 STOT SE 3 H335 ⚠ A.2/2 Skin Irrit. 2 H315 ⚠ A.4.1/1 Resp. Sens. 1 H334 CAN-HAE/C3 Aquatic Chronic 3 H412 ⚠ A.1/1/Inhal Acute Tox. 1 H330 |

4. First-aid measures

Description of necessary first-aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

Most important symptoms/effects, acute and delayed

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

5. Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

In case of fire, use alcohol resistant foam, dry chemical, CO₂, water spray. Do not use water jet.

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the hazardous product

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

None

Explosive properties:

N.D. in volume

Oxidizing properties:

N.D.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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Move undamaged containers from immediate hazard area if it can be done safely.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- Wear personal protection equipment.
- Remove all sources of ignition.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.
- Provide adequate ventilation.
- Remove persons to safety.
- Use appropriate respiratory protection.
- See protective measures under point 7 and 8.

Methods and material for containment and cleaning up

- Wash with plenty of water.

7. Handling and storage

Precautions for safe handling

- Avoid contact with skin and eyes, inhalation of vapours and mists.
- Exercise the greatest care when handling or opening the container.
- Do not use on extensive surface areas in premises where there are occupants.
- Don't use empty container before they have been cleaned.
- Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
- Contaminated clothing should be changed before entering eating areas.
- Do not eat or drink while working.
- See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

- Always keep in a well ventilated place.
- Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
- Avoid accumulating electrostatic charge.
- Keep away from food, drink and feed.
- Incompatible materials:
None in particular.
- Instructions as regards storage premises:
Cool and adequately ventilated.
- Safety electric system.
- Storage temperature:
Store at ambient temperature.

8. Exposure controls/personal protection

Control parameters

- ethyl acetate - CAS: 141-78-6
 - ACGIH - TWA(8h): 400 ppm - Notes: URT and eye irr
 - EU - TWA(8h): 734 mg/m³, 200 ppm - STEL: 1468 mg/m³, 400 ppm
- toluene - CAS: 108-88-3
 - EU - TWA(8h): 192 mg/m³, 50 ppm - STEL: 384 mg/m³, 100 ppm - Notes: Skin
 - ACGIH - TWA(8h): 20 ppm - Notes: A4, BEI - Visual impair, female repro, pregnancy loss
- n-butyl acetate - CAS: 123-86-4
 - ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr
- isobutyl acetate [2] - CAS: 110-19-0
 - ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr
- 4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1
 - EU - TWA(8h): 83 mg/m³, 20 ppm - STEL: 208 mg/m³, 50 ppm
 - ACGIH - TWA(8h): 20 ppm - STEL: 75 ppm - Notes: A3, BEI - URT irr, dizziness, headache
- 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - CAS: 26471-62-5
 - ACGIH - TWA: 0.036 mg/m³, 0.005 ppm - STEL: 0.14 mg/m³, 0.02 ppm

DNEL Exposure Limit Values

- ethyl acetate - CAS: 141-78-6
 - Worker Industry: 1468 mg/m³ - Worker Professional: 1468 mg/m³ - Consumer: 734 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
 - Worker Industry: 1468 mg/m³ - Worker Professional: 1468 mg/m³ - Consumer: 734 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects
 - Worker Industry: 63 mg/kg - Worker Professional: 63 mg/kg - Consumer: 37 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
 - Worker Industry: 734 mg/m³ - Worker Professional: 734 mg/m³ - Consumer: 367 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
 - Worker Industry: 734 mg/m³ - Worker Professional: 734 mg/m³ - Consumer: 367 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
 - Consumer: 4.5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

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toluene - CAS: 108-88-3

Worker Industry: 384 mg/kg - Worker Professional: 384 mg/kg - Consumer: 226 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 192 mg/m³ - Worker Professional: 192 mg/m³ - Consumer: 56.5 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 8.13 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

n-butyl acetate - CAS: 123-86-4

Worker Industry: 960 mg/m³ - Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 960 mg/m³ - Worker Professional: 960 mg/m³ - Consumer: 859.7 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 480 mg/m³ - Worker Professional: 480 mg/m³ - Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 480 mg/m³ - Worker Professional: 480 mg/m³ - Consumer: 102.34 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

isobutyl acetate [2] - CAS: 110-19-0

Worker Industry: 300 mg/m³ - Worker Professional: 300 mg/m³ - Consumer: 35.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 600 mg/m³ - Worker Professional: 600 mg/m³ - Consumer: 300 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 10 mg/kg - Worker Professional: 10 mg/kg - Consumer: 5 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1

Worker Industry: 83 mg/m³ - Worker Professional: 83 mg/m³ - Consumer: 14.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 208 mg/m³ - Worker Professional: 208 mg/m³ - Consumer: 115.2 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 83 mg/m³ - Worker Professional: 83 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 208 mg/m³ - Worker Professional: 208 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 11.8 mg/kg - Worker Professional: 11.8 mg/kg - Consumer: 4.2 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - CAS: 26471-62-5

Worker Industry: 0.14 mg/m³ - Worker Professional: 0.14 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 0.14 mg/m³ - Worker Professional: 0.14 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 0.035 mg/m³ - Worker Professional: 0.035 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 0.035 mg/m³ - Worker Professional: 0.035 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

ethyl acetate - CAS: 141-78-6

Target: Fresh Water - Value: 0.24 mg/l

Target: Marine water - Value: 0.024 mg/l

Target: Intermittent emission - Value: 1.65 mg/l

Target: Microorganisms in sewage treatments - Value: 650 mg/l

Target: Freshwater sediments - Value: 1.15 mg/kg

Target: Marine water sediments - Value: 0.115 mg/kg

Target: Soil (agricultural) - Value: 0.148 mg/kg

Target: Food chain - Value: 200 mg/kg

toluene - CAS: 108-88-3

Target: Fresh Water - Value: 0.68 mg/l

Target: Marine water - Value: 0.68 mg/l

Target: Intermittent emission - Value: 0.68 mg/l

Target: Freshwater sediments - Value: 16.39 mg/kg

Target: Marine water sediments - Value: 16.39 mg/kg

Target: Microorganisms in sewage treatments - Value: 13.61 mg/l

Target: Soil (agricultural) - Value: 2.89 mg/kg

n-butyl acetate - CAS: 123-86-4

Target: Fresh Water - Value: 0.18 mg/l

Target: Marine water - Value: 0.018 mg/l

Target: Intermittent emission - Value: 0.36 mg/l

Target: Freshwater sediments - Value: 0.98 mg/kg

Target: Marine water sediments - Value: 0.098 mg/kg

Target: Microorganisms in sewage treatments - Value: 35.6 mg/l

Target: Soil (agricultural) - Value: 0.09 mg/kg

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isobutyl acetate [2] - CAS: 110-19-0
 Target: Fresh Water - Value: 0.17 mg/l
 Target: Marine water - Value: 0.017 mg/l
 Target: Intermittent emission - Value: 0.34 mg/l
 Target: Microorganisms in sewage treatments - Value: 200 mg/l
 Target: Freshwater sediments - Value: 0.877 mg/kg
 Target: Marine water sediments - Value: 0.0877 mg/kg
 Target: Soil (agricultural) - Value: 0.0755 mg/kg
 4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1
 Target: Fresh Water - Value: 0.6 mg/l
 Target: Freshwater sediments - Value: 0.27 mg/kg
 Target: Microorganisms in sewage treatments - Value: 27.5 mg/l
 Target: Soil (agricultural) - Value: 1.3 mg/kg
 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - CAS: 26471-62-5
 Target: Fresh Water - Value: 0.0125 mg/l
 Target: Marine water - Value: 0.00125 mg/l
 Target: Intermittent emission - Value: 0.125 mg/l
 Target: Microorganisms in sewage treatments - Value: 1 mg/l
 Target: Soil (agricultural) - Value: 1 mg/kg

Appropriate engineering controls

None

Individual protection measures, such as personal protective equipment (PPE)

Eye protection:

Eye glasses with side protection. (EN166)

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber. (EN374)

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

None

9. Physical and chemical properties

| | |
|---|-----------------------------------|
| Appearance and colour: | colourless fluid |
| Odour: | typical |
| Odour threshold: | N.D. |
| pH: | N.A. |
| Melting point / freezing point: | N.D. °C |
| Initial boiling point and boiling range: | > 77 °C |
| Flash point: | < 0 °C |
| Evaporation rate: | N.D. |
| Solid/gas flammability: | N.A. |
| Upper/lower flammability or explosive limits: | 11.5% - 2.1% Vol. (Ethyl acetate) |
| Vapour pressure: | N.D. (20 °C) |
| Vapour density: | > 1 |
| Relative density: | 0.955 - 0.975 |
| Solubility in water: | partial,reacts |
| Solubility in oil: | partial |
| Partition coefficient (n-octanol/water): | N.D. |
| Auto-ignition temperature: | > 300 °C |
| Decomposition temperature: | N.D. °C |
| Viscosity: | N.D. |

10. Stability and reactivity

Reactivity

It may generate dangerous reactions (See subsections below)

Chemical stability

It may generate dangerous reactions (See subsections below)

Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth, alloys in powder or vapours) and powerful reducing agents.

It may generate toxic gases on contact with oxidising mineral acids, and powerful oxidising agents.

It may catch fire on contact with oxidising mineral acids, and powerful oxidising agents.

Conditions to avoid

Avoid accumulating electrostatic charge.

Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

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Hazardous decomposition products
None.

11. Toxicological information

Information on toxicological effects

Toxicological information of the product:

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a) acute toxicity

Not classified

No data available for the product

b) skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

c) serious eye damage/irritation

The product is classified: Eye Irrit. 2A H319

d) respiratory or skin sensitisation

The product is classified: Resp. Sens. 1 H334; Skin Sens. 1 H317

e) germ cell mutagenicity

Not classified

No data available for the product

f) carcinogenicity

The product is classified: Carc. 2 H351

g) reproductive toxicity

The product is classified: Repr. 2 H361

h) STOT-single exposure

The product is classified: STOT SE 3 H336

i) STOT-repeated exposure

The product is classified: STOT RE 2 H373

j) aspiration hazard

The product is classified: Asp. Tox. 1 H304

Toxicological information of the main substances found in the product:

ethyl acetate - CAS: 141-78-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 4934 mg/kg - Source: OCSE 401

Test: LD50 - Route: Skin - Species: Rabbit > 20000 mg/kg

toluene - CAS: 108-88-3

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 5580 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 28.1 mg/l - Duration: 4h - Source: OECD 403

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: Rabbit = 500 mg/kg - Source: OECD 404 - Notes: 24h

n-butyl acetate - CAS: 123-86-4

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 10760 mg/kg - Source: OECD 423

Test: LC50 - Route: Inhalation - Species: Rat > 23.4 mg/l - Duration: 4h - Source: OECD 403

Test: LD50 - Route: Skin - Species: Rabbit > 14000 mg/kg - Source: OECD 402

isobutyl acetate [2] - CAS: 110-19-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 13.4 g/kg - Source: OCSE 401

Test: LD50 - Route: Oral - Species: Rabbit = 4.76 g/kg

Test: LC50 - Route: Inhalation - Species: Rat > 23.4 mg/l - Duration: 4h - Source: OCSE 403

Test: LD50 - Route: Skin - Species: Rabbit > 17.4 g/kg - Source: OCSE 402

4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 2000 Ppm - Duration: 4h - Source: OCSE 403

Test: LD50 - Route: Oral - Species: Rat = 2080 mg/kg - Source: OCSE 401

Test: LD50 - Route: Skin - Species: Rabbit > 20 ml/kg - Source: OCSE 402

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - CAS: 26471-62-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 5110 mg/kg - Source: OECD 401

Test: LD50 - Route: Skin - Species: Rabbit > 9400 mg/kg - Source: OECD 402

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.47 mg/l - Duration: 1h - Source: OECD 403

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 0.107 mg/l - Duration: 4h - Source: OECD 403

f) carcinogenicity:

Test: NOAEC - Route: Inhalation - Species: Rat = 1086 mg/m³ - Duration: 2 years - Source: OECD 453 - Notes:

Positive

ethyl acetate - CAS: 141-78-6

The product is extremely volatile and provokes for inhalation, irritation to respiratory tracts. Acute exposition can cause depression of central nervous system with effects such as drowsiness, reflex loss, narcosis.

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toluene - CAS: 108-88-3

Effects following acute exposure:

At 200 ppm: mild but definite decrease in co-ordination and in reaction time, fatigue, confusion, paraesthesia of the skin; the fatigue lasted over a number of hours together with mild insomnia.

At 400 ppm: worsening of symptoms and mental confusion.

n-butyl acetate - CAS: 123-86-4

The vapours can cause headache and nausea. As a liquid it can irritate the eyes and cause conjunctivitis, it can irritate the skin and cause dermatitis and, if swallowed, causes inebriation, hallucinations and sedation.

Symptoms of illness at 500 ppm. Serious toxic effects at 2.000 ppm for 60 min.

4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1

Product is harmful if inhaled.

Repeated exposure can cause irritation to respiratory tract, skin dryness, cough, cephalaea, nausea, dizziness and vomiting. Symptoms of chronic exposure are neurological, gastro-intestinal and respiratory.

Substance(s) listed on the NTP report on Carcinogens:

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

Substance(s) listed on the IARC Monographs:

toluene - Group 3

4-methylpentan-2-one; isobutyl methyl ketone - Group 2B

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - Group 2B.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

12. Ecological information

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

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Not classified for environmental hazards

No data available for the product

ethyl acetate - CAS: 141-78-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Algae > 100 mg/l - Duration h: 72

Endpoint: EC50 - Species: Daphnia = 165 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 230 mg/l - Duration h: 96

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 2.4 mg/l - Notes: 21d

toluene - CAS: 108-88-3

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 134 mg/l - Duration h: 3

Endpoint: EC50 - Species: Daphnia = 3.78 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 5.5 mg/l - Duration h: 96

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae = 10 mg/l - Duration h: 72

Endpoint: NOEC - Species: Daphnia = 0.74 mg/l - Notes: 7d

Endpoint: NOEC - Species: Fish = 1.39 mg/l - Notes: 40d

n-butyl acetate - CAS: 123-86-4

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 18 mg/l - Duration h: 96 - Notes: OECD 203

Endpoint: EC50 - Species: Daphnia = 44 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 674 mg/l - Duration h: 72

isobutyl acetate [2] - CAS: 110-19-0

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 397 mg/l - Duration h: 72 - Notes: OCSE 201

Endpoint: EC50 - Species: Daphnia = 24.6 mg/l - Duration h: 48 - Notes: OCSE 202

Endpoint: LC50 - Species: Fish = 16.6 mg/l - Duration h: 96 - Notes: OCSE 203

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 23.2 mg/l - Notes: OCSE 201 (21d)

4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 200 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish > 179 mg/l - Duration h: 96 - Notes: OCSE 203

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae > 146 mg/l - Notes: 7 days

Endpoint: NOEC - Species: Daphnia = 30 mg/l - Notes: 21 days

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - CAS: 26471-62-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 133 mg/l - Duration h: 96 - Notes: OECD 203

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| | |
|---|---|
| | Endpoint: EC50 - Species: Daphnia = 12.5 mg/l - Duration h: 48 - Notes: OECD 202 |
| b) Aquatic chronic toxicity: | Endpoint: NOEC - Species: Daphnia = 1.1 mg/l - Duration h: 504 - Notes: OECD 211 |
| Persistence and degradability | |
| toluene - CAS: 108-88-3 | Biodegradability: Readily biodegradable - Test: N.A. - Duration h: N.A. - %: N.A. - Notes: N.A. |
| n-butyl acetate - CAS: 123-86-4 | Biodegradability: Readily biodegradable - Test: N.A. - Duration h: N.A. - %: N.A. - Notes: N.A. |
| isobutyl acetate [2] - CAS: 110-19-0 | Biodegradability: Readily biodegradable - Test: N.A. - Duration h: N.A. - %: N.A. - Notes: N.A. |
| 4-methylpentan-2-one; isobutyl methyl ketone - CAS: 108-10-1 | Biodegradability: Readily biodegradable - Test: N.A. - Duration h: N.A. - %: N.A. - Notes: N.A. |
| 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - CAS: 26471-62-5 | Biodegradability: Non-readily biodegradable - Test: Biochemical oxygen demand - Duration h: 28 days - %: 0 - Notes: OECD 302C |
| Bioaccumulative potential | N.A. |
| Mobility in soil | N.A. |
| Other adverse effects | None |

13. Disposal considerations

Safe handling and methods for disposal
 Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

14. Transport information



| | |
|-------------------------------------|---|
| UN number | |
| TDG number: | UN1263 |
| ADR-UN Number: | 1263 |
| DOT number: | UN1263 |
| IATA-UN Number: | 1263 |
| IMDG-UN Number: | 1263 |
| UN proper shipping name | |
| TDG-Shipping Name: | PAINT |
| ADR-Shipping Name: | PAINT |
| DOT-Shipping Name: | Paint including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base or Paint related material including paint thinning, drying, removing, or reducing compound |
| ADR-Technical Name: | Paint |
| IATA-Shipping Name: | PAINT |
| IATA-Technical name: | Paint |
| IMDG-Shipping Name: | PAINT |
| IMDG-Shipping name: | Paint |
| Transport hazard class(es) | |
| TDG Class: | 3 |
| ADR-Class: | 3 |
| DOT Hazard Class: | 3 |
| ADR - Hazard identification number: | 33 |
| IATA-Class: | 3 |
| IATA-Label: | 3 |
| IMDG-Class: | 3 |
| Packing group | |
| TDG Packing group: | II |
| ADR-Packing Group: | II |
| DOT Packing group: | II |
| IATA-Packing group: | II |
| IMDG-Packing group: | II |
| Environmental hazards | |
| ADR-Enviromental Pollutant: | No |
| IMDG-Marine pollutant: | No |

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

N.A.

Special precautions in connection with transport or conveyance

| | |
|---|---|
| Rail (RID): | 3 |
| TDG Special provisions: | 59,142 |
| DOT Special provisions: | 149, 367, 383, B52, B131, IB2, T4, TP1, TP8, TP28 |
| ADR-Subsidiary risks: | - |
| ADR-S.P.: | 163 367 640D 650 |
| ADR-Transport category (Tunnel restriction code): | 2 (D/E) |
| IATA-Passenger Aircraft: | 353 |
| IATA-Subsidiary risks: | - |
| IATA-Cargo Aircraft: | 364 |
| IATA-S.P.: | A3 A72 A192 |
| IATA-ERG: | 3L |
| IMDG-EmS: | F-E , S-E |
| IMDG-Subsidiary risks: | - |
| IMDG-Stowage and handling: | Category A |
| IMDG-Segregation: | - |

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

This Safety Data Sheet has been prepared according to the Hazardous Products Regulations (HPR) - WHMIS 2015.

NPRI - National Pollutant Release Inventory

Substance(s) listed under NPRI:

None.

DSL inventory - Domestic substances list

no substances listed

NDSL inventory - Not Domestic substances list

no substances listed

TSCA inventory

All the components are listed on the TSCA inventory.

TSCA listed substances:

ethyl acetate is listed in TSCA Section 8b

toluene is listed in TSCA Section 8b, Section 8d HSDR, Section 8a - CAIR

n-butyl acetate is listed in TSCA Section 8b

Aromatic polyisocyanate CAS 9017-01-0 is listed in TSCA Section 12b, Section 8b

isobutyl acetate [2] is listed in TSCA Section 8b

Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidene-trimethanol is listed in TSCA Section 8b

4-methylpentan-2-one; isobutyl methyl ketone is listed in TSCA Section 8b, Section 8d HSDR

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; is listed in TSCA Section 12b, Section 8b, Section 8d HSDR, Section 8a - CAIR.

USA - Federal regulations

SARA - Superfund Amendments and Reauthorization Act

Section 302 – Extremely Hazardous Substances: no substances listed.

Section 304 – Hazardous substances: ethyl acetate, toluene, n-butyl acetate, isobutyl acetate [2],

4-methylpentan-2-one; isobutyl methyl ketone, 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

Section 313 – Toxic chemical list: toluene, 4-methylpentan-2-one; isobutyl methyl ketone, 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA: ethyl acetate - Reportable quantity: 5000 pounds

toluene - Reportable quantity: 1000 pounds

n-butyl acetate - Reportable quantity: 5000 pounds

isobutyl acetate [2] - Reportable quantity: 5000 pounds

4-methylpentan-2-one; isobutyl methyl ketone - Reportable quantity: 5000 pounds

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - Reportable quantity: 100 pounds.

Reportable quantity for mixture: 5000 pounds.

CAA - Clean Air Act

CAA listed substances:

ethyl acetate is listed in CAA Section 111

toluene is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON

n-butyl acetate is listed in CAA Section 111

isobutyl acetate [2] is listed in CAA Section 111

4-methylpentan-2-one; isobutyl methyl ketone is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; is listed in CAA Section 111, Section 112(b) - HON, Section 112(r).

CWA - Clean Water Act

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CWA listed substances:

ethyl acetate is listed in CWA Section 304

toluene is listed in CWA Section 304, Section 307, Section 311, CWA Priority Pollutants

n-butyl acetate is listed in CWA Section 304, Section 311

isobutyl acetate [2] is listed in CWA Section 311

4-methylpentan-2-one; isobutyl methyl ketone is listed in CWA Section 304.

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

toluene - Listed as reproductive toxicant

4-methylpentan-2-one; isobutyl methyl ketone - Listed as carcinogen and reproductive toxicant

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; - Listed as carcinogen.

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

ethyl acetate

toluene

n-butyl acetate

isobutyl acetate [2]

4-methylpentan-2-one; isobutyl methyl ketone

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

ethyl acetate

toluene

n-butyl acetate

isobutyl acetate [2]

4-methylpentan-2-one; isobutyl methyl ketone

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

ethyl acetate

toluene

n-butyl acetate

isobutyl acetate [2]

4-methylpentan-2-one; isobutyl methyl ketone

2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

Volatile Organic compounds - VOCs = 75.75 %

Volatile Organic compounds - VOCs = 738.58 g/l

Volatile CMR substances = 0.00 %

Organic Carbon - C = 0.51

16. Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H332 Harmful if inhaled.

H351 Suspected of causing cancer.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412 Harmful to aquatic life with long lasting effects.

H330 Fatal if inhaled.

Safety Data Sheet dated 4/3/2018, version 1

Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

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| | |
|-----------|---|
| CLP: | Classification, Labeling, Packaging. |
| DNEL: | Derived No Effect Level. |
| EINECS: | European Inventory of Existing Commercial Chemical Substances. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| HMIS: | Hazardous Materials Identification System |
| IARC: | International Agency for Research on Cancer |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| NFPA: | National Fire Protection Association |
| NIOSH: | National Institute for Occupational Safety and Health |
| NTP: | National Toxicology Program |
| OSHA: | Occupational Safety and Health Administration. |
| PNEC: | Predicted No Effect Concentration. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| TLV: | Threshold Limiting Value. |
| TWA: | Time-weighted average |