

Safety Data Sheet



LCB185 CATALIZZATORE per PU - Catalyst for PU

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

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: CATALIZZATORE per PU - Catalyst for PU

Other means of identification:

Trade code: LCB185

Recommended use of the chemical and restrictions on use

Recommended use:

Industrial and professional uses (SU3 - SU22)

Catalyst for paints and varnishes

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

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:+1-860-529-7704

Distributor:

Quincaillerie Richelieu Ltée/Richelieu Hardware Ltd.

7900 Henri-Bourassa Blvd. W.

Montreal, Quebec, Canada, H4S 1V4

Tel:+1-860-529-7704

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(S) IDENTIFICATION

Classification of the chemical

- ⚠ 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.

Label elements

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.

Precautionary statements:

P201 Obtain special instructions before use.

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P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
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.
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 soap and 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.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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/doctor/...
P362+P364 Take off contaminated clothing and wash it before reuse.
P363 Wash contaminated clothing 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

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

Additional classification information

NFPA rating:



HMIS rating:

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FLAMMABILITY	3
PHYSICAL HAZARD	1
PERSONAL PROTECTION	G

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 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	<ul style="list-style-type: none"> ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ B.6/2 Flam. Liq. 2 H225 ⚠ 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	<ul style="list-style-type: none"> ⚠ 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.: 01-2119485493-29	<ul style="list-style-type: none"> ⚠ B.6/3 Flam. Liq. 3 H226 ⚠ A.8/3 STOT SE 3 H336
>= 15% - < 20%	Aromatic polyisocyanate CAS 9017-01-0	CAS: 9017-01-0	<ul style="list-style-type: none"> ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ A.4.2/1 Skin Sens. 1 H317
>= 7% - < 10%	isobutyl acetate [2]	Index number: 607-026-00-7 CAS: 110-19-0 EC: 203-745-1 REACH No.: 01-2119488971-22	<ul style="list-style-type: none"> ⚠ 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 propylidenetriethanol	CAS: 53317-61-6 EC: 500-120-8	<ul style="list-style-type: none"> ⚠ 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: 606-004-00-4 CAS: 108-10-1 EC: 203-550-1 REACH No.: 01-2119473980-30	<ul style="list-style-type: none"> ⚠ B.6/2 Flam. Liq. 2 H225 ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ 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: 615-006-00-4 CAS: 26471-62-5 EC: 247-722-4 REACH No.: 01-2119454791-34	<ul style="list-style-type: none"> ⚠ A.6/2 Carc. 2 H351 ⚠ A.3/2A Eye Irrit. 2A H319 ⚠ A.8/3 STOT SE 3 H335 ⚠ A.2/2 Skin Irrit. 2 H315 ⚠ A.4.1/1 Resp. Sens. 1 H334 ⚠ A.4.2/1 Skin Sens. 1 H317

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			US-HAE/C3 Aquatic Chronic 3 H412 ⚠ A.1/1/Inhal Acute Tox. 1 H330
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4. FIRST-AID MEASURES

Description of necessary 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

- 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 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 chemical

- 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.
- 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 materials 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.

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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
 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

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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

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

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:

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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
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	11.5% - 2.1% Vol. (Ethyl acetate)
Vapour density:	> 1
Flash point:	< 0 °C
Evaporation rate:	N.D.
Vapour pressure:	N.D. (20 °C)
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.
Miscibility:	N.D.
Fat Solubility:	N.D.
Conductivity:	N.D.
Substance Groups relevant properties	N.A.

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.

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

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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.

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, cephalic 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.

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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

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

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13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

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	
ADR-UN Number:	1263
DOT number:	UN1263
IATA-UN Number:	1263
IMDG-UN Number:	1263
UN proper shipping name	
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)	
ADR-Class:	3
DOT Hazard Class:	3
ADR - Hazard identification number:	33
IATA-Class:	3
IATA-Label:	3
IMDG-Class:	3
Packing group	
ADR-Packing Group:	II
DOT Packing group:	II
IATA-Packing group:	II
IMDG-Packing group:	II
Environmental hazards	
ADR-Environmental Pollutant:	No
IMDG-Marine pollutant:	No
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	
	N.A.
Special precautions	
Rail (RID):	3
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

USA - Federal regulations

TSCA - Toxic Substances Control Act

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

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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.

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
 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

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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:

H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.
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).
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