







LCB060 CATALIZZATORE non ingiallente- non-yellowing catalyst

Safety Data Sheet dated 1/25/2023, version 2

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: CATALIZZATORE non ingiallente- non-yellowing catalyst

Other means of identification:

Trade code: LCB060

Recommended use of the chemical and restrictions on use

Recommended use: IS- Industrial use

PW - Professional use

Catalyst for paints and varnishes

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

NUOVA S.I.V.A.M. SpA - Via Monviso, 10 - 20008 BAREGGIO (MI) - Tel. +39 02-903041

Importer:

Richelieu America Itd, 7021 Sterling Ponds Blvd, Sterling Heights, MI 48312-5809 U.S. Tel:

+1-800-361-6000.

Emergency phone number for U.S.A.: Chemtrec +1-800-424-9300

Distributor:

Richelieu America Itd, 7021 Sterling Ponds Blvd, Sterling Heights, MI 48312-5809 U.S. Tel: +1-800-361-6000.

Emergency phone number for U.S.A.: Chemtrec +1-800-424-9300

Competent person responsible for the safety data sheet:

msds@sivam.it

Emergency phone number:

NUOVA S.I.V.A.M. SpA - Tel. +39 02- 903041 (Monday - Friday 8.00 - 15.00)

Poison Centre - Ospedale di Niguarda Ca' Granda - 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, Eye Irrit. 2A, Causes serious eye irritation.
- Danger, Resp. Sens. 1, May cause allergy or asthma symptoms or breathing difficulties if
- 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.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

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

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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.

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/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 must 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.

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).

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/...

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire, use alcool 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:



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HMIS rating:



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
>= 30% - < 40%	n-butyl acetate	Index number: CAS: EC: REACH No.:	607-025-00-1 123-86-4 204-658-1 01- 2119485493 -29	 ₱ B.6/3 Flam. Liq. 3 H226 ₱ A.8/3 STOT SE 3 H336
>= 20% - < 25%	aliphatic-aromatic homopolymer	CAS: EC:	26426-91-5 642-372-2	A.3/2A Eye Irrit. 2A H319A.4.2/1 Skin Sens. 1 H317
>= 15% - < 20%	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
>= 7% - < 10%	butanone; ethyl methyl ketone	Index number: CAS: EC: REACH No.:	78-93-3 201-159-0	 ₱ B.6/2 Flam. Liq. 2 H225 ₱ A.3/2A Eye Irrit. 2A H319 ₱ A.8/3 STOT SE 3 H336
>= 7% -	toluene	Index	601-021-00-3	♦ B.6/2 Flam. Liq. 2 H225

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< 10%		number: CAS: EC: REACH No.:	108-88-3 203-625-9 01- 2119471310 -51	 ♣ A.7/2 Repr. 2 H361 ♠ A.10/1 Asp. Tox. 1 H304 ♠ A.9/2 STOT RE 2 H373 ♠ A.2/2 Skin Irrit. 2 H315 ♠ A.8/3 STOT SE 3 H336
>= 7% - < 10%	HDI oligomers, isocyanurate	CAS: EC: REACH No.:	28182-81-2 931-274-8 01- 2119485796 -17	 ♠ A.1/4/Inhal Acute Tox. 4 H332 ♠ A.4.2/1 Skin Sens. 1 H317 ♠ A.8/3 STOT SE 3 H335
>= 0.1% - < 0.25%	hexamethylene-di- isocyanate	Index number: CAS: EC: REACH No.:	822-06-0 212-485-8	 ♠ A.1/1/Inhal Acute Tox. 1 H330 ♠ A.1/4/Oral Acute Tox. 4 H302 ♠ 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 Specific Concentration Limits: C >= 0,5%: Resp. Sens. 1 H334 C >= 0,5%: Skin Sens. 1 H317
>= 0.1% - < 0.25%	2-methyl-m-phenylene diisocyanate; toluene- 2,4-di-isocyanate;	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.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 US-HAE/C3 Aquatic Chronic 3 H412 ♠ A.1/1/Inhal Acute Tox. 1 H330 Specific Concentration Limits: C >= 0,1%: Resp. Sens. 1 H334

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 opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

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:

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None

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

In case of fire, use alcool 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.

Remove persons to safety.

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.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

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

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

ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

EU - TWA(8h): 241 mg/m3, 50 ppm - STEL: 723 mg/m3, 150 ppm

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

ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

EU - TWA(8h): 241 mg/m3, 50 ppm - STEL: 723 mg/m3, 150 ppm

butanone; ethyl methyl ketone - CAS: 78-93-3

EU - TWA(8h): 600 mg/m3, 200 ppm - STEL: 900 mg/m3, 300 ppm

ACGIH - TWA(8h): 200 ppm - STEL: 300 ppm - Notes: BEI - URT irr, CNS and PNS impair

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: OTO; A4; BEI - CNS, visual & hearing impair; female repro system eff; pregnancy loss

HDI oligomers, isocyanurate - CAS: 28182-81-2

EU - STEL: 1 mg/m3

hexamethylene-di-isocyanate - CAS: 822-06-0

ACGIH - TWA(8h): 0.005 ppm - Notes: URT irr, resp sens

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

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

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: 300 mg/m3 - Worker Professional: 300 mg/m3 - Consumer: 35.7 mg/m3

- Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 11 mg/kg - Worker Professional: 11 mg/kg - Consumer: 6 mg/kg -

Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 2 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic 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 butanone; ethyl methyl ketone - CAS: 78-93-3

Worker Industry: 1161 mg/kg - Worker Professional: 1161 mg/kg - Consumer: 412 mg/kg

- Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 600 mg/m3 - Worker Professional: 600 mg/m3 - Consumer: 106 mg/m3

- Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 31 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

HDI oligomers, isocyanurate - CAS: 28182-81-2

Worker Industry: 0.5 mg/m3 - Worker Professional: 0.5 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 1 mg/m3 - Worker Professional: 1 mg/m3 - Exposure: Human Inhalation

- Frequency: Short Term, local effects

hexamethylene-di-isocyanate - CAS: 822-06-0

Worker Industry: 0.07 mg/m3 - Worker Professional: 0.07 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, systemic effects



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Worker Industry: 0.07 mg/m3 - Worker Professional: 0.07 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

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

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

butanone; ethyl methyl ketone - CAS: 78-93-3

Target: Fresh Water - Value: 55.8 mg/l

Target: Marine water - Value: 55.8 mg/l

Target: Freshwater sediments - Value: 284.7 mg/kg Target: Marine water sediments - Value: 284.7 mg/kg

Target: Microorganisms in sewage treatments - Value: 709 mg/l

Target: Soil (agricultural) - Value: 22.5 mg/kg

Target: Food chain - Value: 1000 mg/kg

toluene - CAS: 108-88-3

Target: Fresh Water - Value: 0.074 mg/l

Target: Marine water - Value: 0.0074 mg/l

Target: Freshwater sediments - Value: 1.78 mg/kg

Target: Marine water sediments - Value: 0.178 mg/kg

Target: Microorganisms in sewage treatments - Value: 0.84 mg/l

Target: Soil (agricultural) - Value: 0.313 mg/kg

HDI oligomers, isocyanurate - CAS: 28182-81-2

Target: Fresh Water - Value: 0.127 mg/l

Target: Marine water - Value: 0.0127 mg/l

Target: Intermittent emission - Value: 1.27 mg/l

Target: Microorganisms in sewage treatments - Value: 38.3 mg/l

hexamethylene-di-isocyanate - CAS: 822-06-0

Target: Fresh Water - Value: 0.0774 mg/l

Target: Marine water - Value: 0.00774 mg/l

Target: Freshwater sediments - Value: 0.01334 mg/kg

Target: Marine water sediments - Value: 0.001334 mg/kg



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Target: Intermittent emission - Value: 0.774 mg/l

Target: Microorganisms in sewage treatments - Value: 8.42 mg/l

Target: Soil (agricultural) - Value: 0.0026 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

Biological Exposure Index

toluene - CAS: 108-88-3

Value: 0.02 mg/L - medium: Blood - Biological Indicator: Toluene in blood - Sampling

Period: End of turn; End of working week

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:

Use adequate protective respiratory equipment.

Thermal Hazards:

None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour: Liquid, Transparent

Odour: typical Odour threshold: N.D.

pH: Not Relevant Melting point / freezing point: N.D. °C

Initial boiling point and boiling range: > 79 °C

Solid/gas flammability: N.A.

Upper/lower flammability or explosive limits: 7.5% - 1.6% Vol. (n-butyl acetate)

N.D.

N.A.

Vapour density: > 1
Flash point: < 0 °C
Evaporation rate: N.D.
Vapour pressure: N.D. (20 °C)
Relative density: 0.950 - 0.970
Solubility in water: partial, reacts

Solubility in oil: partial Partition coefficient (n-octanol/water): > 300 °C Auto-ignition temperature: Decomposition temperature: N.D. °C Viscosity: N.D. Miscibility: N.D. Fat Solubility: N.D. Conductivity: N.D. Substance Groups relevant properties

10. STABILITY AND REACTIVITY

Reactivity

It may generate dangerous reactions (See subsections below)

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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

Not classified

No data available for the product

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

Not classified

No data available for the product

Toxicological information of the main substances found in the product:

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 > 21 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

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butanone; ethyl methyl ketone - CAS: 78-93-3

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2054 mg/kg - Source: OECD 423 Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg - Source: OECD 402

Test: LC50 - Route: Inhalation - Species: Rat = 23.5 mg/l - Duration: 8h

toluene - CAS: 108-88-3

a) acute toxicity:

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

Test: LC50 - Route: Inhalation - Species: Rat = 25.7 mg/l - Duration: 4h - Source: OECD 403

b) skin corrosion/irritation:

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

HDI oligomers, isocyanurate - CAS: 28182-81-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2500 mg/kg Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Test: LC50 - Route: Inhalation Mist - Species: Rat = 1.5 mg/l - Duration: 4h - Source: **OECD 403**

hexamethylene-di-isocyanate - CAS: 822-06-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 746 mg/kg Test: LC50 - Route: Skin - Species: Rabbit = 570 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 0.124 mg/l - Duration: 4h - Source: OCSE

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

Test: LD50 - Route: Oral - Species: Rat = 4130 mg/kg - Source: OECD 401 Test: LD50 - Route: Skin - Species: Rabbit > 9400 mg/kg - Source: OECD 402

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

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

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.

butanone; ethyl methyl ketone - CAS: 78-93-3

High exposure can cause

drowsiness, migraine, narcosis and dizziness.

The extended contact and/or repeated with skin can cause dermatitis.

Environmental concentrations more than 200 ppm result irritanting for eyes and respiratory tract.

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.

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

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

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

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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

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

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae = 200 mg/l - Duration h: 72

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

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 370 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)

butanone; ethyl methyl ketone - CAS: 78-93-3

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 308 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 2029 mg/l - Duration h: 96

Endpoint: LC50 - Species: Fish = 2993 mg/l - Duration h: 96

toluene - CAS: 108-88-3

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 12.5 mg/l - Duration h: 72

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

hexamethylene-di-isocyanate - CAS: 822-06-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 22 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 89.1 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 77.4 mg/l - Duration h: 72

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae = 11.7 mg/l - Duration h: 72

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

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

Biodegradability: Readily biodegradable - Duration h: 28 days - %: 83

isobutyl acetate [2] - ĆAS: 110-19-0

Biodegradability: Readily biodegradable

butanone; ethyl methyl ketone - CAS: 78-93-3



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Biodegradability: Readily biodegradable - Duration h: 28 days - %: 98 - Notes: OECD

301D

toluene - CAS: 108-88-3

Biodegradability: Readily biodegradable HDI oligomers, isocyanurate - CAS: 28182-81-2

Biodegradability: Non-readily biodegradable - Duration h: 28 days - %: 1

hexamethylene-di-isocyanate - CAS: 822-06-0

Biodegradability: Non-readily biodegradable - Test: Biochemical oxigen demand -

Duration h: 28 days - %: 42

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

Biodegradability: Non-readily biodegradable - Test: Biochemical oxigen 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

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 IATA-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 IMDG-Class: 3

Packing group

ADR-Packing Group: II
DOT Packing group: II
IATA-Packing group: II
IMDG-Packing group: II

Environmental hazards

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ADR-Enviromental 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 hazards:

ADR-S.P.: 163 367 640D 650

ADR-Transport category (Tunnel restriction code): 2 (D/E)

IATA-Passenger Aircraft: 353 IATA-Subsidiary hazards: -IATA-Cargo Aircraft: 364

IATA-S.P.: A3 A72 A192

IATA-ERG: 3L

IMDG-EmS: F-E , S-E

IMDG-Subsidiary hazards:

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:

n-butyl acetate is listed in TSCA Section 8b

aliphatic-aromatic homopolymer is listed in TSCA Section 8b

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

butanone; ethyl methyl ketone is listed in TSCA Section 8b, Section 8d HSDR toluene is listed in TSCA Section 8b, Section 8d HSDR, Section 8a - CAIR

HDI oligomers, isocyanurate is listed in TSCA Section 8b

hexamethylene-di-isocyanate 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: n-butyl acetate, isobutyl acetate [2], butanone; ethyl methyl ketone, toluene, hexamethylene-di-isocyanate, 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate;.

Section 313 – Toxic chemical list: toluene, hexamethylene-di-isocyanate,

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

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

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

isobutyl acetate [2] - Reportable quantity: 5000 pounds

butanone; ethyl methyl ketone - Reportable quantity: 5000 pounds

toluene - Reportable quantity: 1000 pounds

hexamethylene-di-isocyanate - Reportable quantity: 100 pounds

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

Reportable quantity for mixture: 12500 pounds.

CAA - Clean Air Act

CAA listed substances:

n-butyl acetate is listed in CAA Section 111 >= 30% - < 40%

isobutyl acetate [2] is listed in CAA Section 111 >= 15% - < 20%

butanone; ethyl methyl ketone is listed in CAA Section 111, Section 112(b) - HON >= 7% - < 10%

toluene is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON >= 7% -



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< 10%

hexamethylene-di-isocyanate is listed in CAA Section 112(b) - HAP \geq 0.1% - < 0.25% 2-methyl-m-phenylene diisocyanate; toluene-2,4-di-isocyanate; is listed in CAA Section 111, Section 112(b) - HON, Section 112(r) \geq 0.1% - < 0.25%.

CWA - Clean Water Act

CWA listed substances:

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

isobutyl acetate [2] is listed in CWA Section 311

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

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

toluene - Listed as 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:

n-butyl acetate

isobutyl acetate [2]

butanone; ethyl methyl ketone

toluene

hexamethylene-di-isocyanate

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

New Jersey Right to know

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

n-butyl acetate

isobutyl acetate [2]

butanone; ethyl methyl ketone

toluene

hexamethylene-di-isocyanate

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

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

n-butyl acetate

isobutyl acetate [2]

butanone; ethyl methyl ketone

toluene

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

Volatile Organic compounds - VOCs = 68.53 % Volatile Organic compounds - VOCs = 664.74 g/l

Volatile CMR substances = 0.00 %

Organic Carbon - C = 0.45

16. OTHER INFORMATION

Full text of phrases referred to in Section 3:

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H225 Highly flammable liquid and vapour.

H361 Suspected of damaging fertility or the unborn child.

H304 May be fatal if swallowed and enters airways.

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

H315 Causes skin irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

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H330 Fatal if inhaled.

H302 Harmful if swallowed.

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

H351 Suspected of causing cancer.

H412 Harmful to aquatic life with long lasting effects.

Safety Data Sheet dated 1/25/2023, version 2 Sections modified from the previous revision:

2. HAZARD(S) IDENTIFICATION

- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 15. REGULATORY INFORMATION

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.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

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.

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TWA: Time-weighted average