

Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

TETRA SEAL

Date of first edition: 7/26/2023

Safety Data Sheet dated 30/01/2025

version 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name: TETRA SEAL

Trade code: K50497

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Adhesives, sealants

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL IBÉRICA S.A.

Carretera de Alcora, Km. 10,450 – 12006 Castellón de la Plana – España

Tel. +34 964 251 500 – Fax +34 964 241 100

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Poison information centre: 01 809 2166 (Daily 8am-10pm) In case of emergency call 999 or 112

Malta In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Skin Sens. 1A May cause an allergic skin reaction.

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word



Warning

Hazard statements

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P280 Wear protective gloves and eye protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P501 Dispose of contents/container in accordance with applicable regulations.

Contains

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-

pentamethylpiperidin-4-yl) decanedioate

2-octyl-2H-isothiazol-3-one

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: TETRA SEAL

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
≥3-<5 %	Trimethoxyphenylsilane	CAS:2996-92-1 EC:221-066-9	Acute Tox. 4, H302; STOT RE 2, H373	01-2119964479-19
≥0.5-<1 %	1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	CAS:1065336-91-5 EC:915-687-0	Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Repr. 2, H361; Skin Sens. 1A, H317, M-Chronic:1, M-Acute:1	01-2119491304-40-XXXX
<0.05 %	methanol	CAS:67-56-1 EC:200-659-6 Index:603-001-00-X	Flam. Liq. 2, H225 STOT SE 1, H370 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Specific Concentration Limits: C ≥ 10%: STOT SE 1 H370 3% ≤ C < 10%: STOT SE 2 H371	01-2119433307-44
<0.05 %	1-methoxy-2-propanol; monopropylene glycol methyl ether	CAS:107-98-2 EC:203-539-1 Index:603-064-00-3	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119457435-35
<0.01 %	2-octyl-2H-isothiazol-3-one	CAS:26530-20-1 EC:247-761-7 Index:613-112-00-5	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Corrosive to the respiratory tract., M-Chronic:100, M-Acute:100 Specific Concentration Limits: C ≥ 0.0015%: Skin Sens. 1A H317 Acute Toxicity Estimate: ATE - Oral: 125mg/kg bw ATE - Dermal: 311mg/kg bw	

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- Remove contaminated clothing immediatley and dispose off safely.

In case of eyes contact:

- Wash immediately with water.

In case of Ingestion:

- Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

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

4.2. Most important symptoms and effects, both acute and delayed

N.A.

4.3. Indication of any 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).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

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.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Limestone
CAS: 1317-65-3

OEL Type	Country	Occupational Exposure Limit
NATIONAL	BULGARIA	Long Term: 10 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
NATIONAL	ESTONIA	Long Term: 10 mg/m ³ Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	ESTONIA	Long Term: 5 mg/m ³ Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	GREECE	Long Term: 10 mg/m ³ εισπν Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	GREECE	Long Term: 5 mg/m ³ αvapn Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	GREECE	Long Term: 10 mg/m ³ εισπν. Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	GREECE	Long Term: 5 mg/m ³ αvapn. Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 10 mg/m ³ N Source: 5/2020. (II. 6.) ITM rendelet
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 10 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	IRELAND	Long Term: 10 mg/m ³ Source: 2021 Code of Practice
NATIONAL	IRELAND	Long Term: 4 mg/m ³ Source: 2021 Code of Practice

di isononylphthalate CAS: 28553-12-0	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 5 mg/m3 (8h)
	NATIONAL	CROATIA	Long Term: 5 mg/m3 Source: NN 1/2021
	NATIONAL	IRELAND	Long Term: 5 mg/m3 Source: 2021 Code of Practice
	NATIONAL	CZECHIA	Long Term: 3 mg/m3; Short Term: Ceiling - 10 mg/m3 Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 3 mg/m3 Source: BEK nr 2203 af 29/11/2021
Calcium carbonate CAS: 471-34-1	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 5 mg/m3 Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	NATIONAL	AUSTRALIA	Long Term: 10 mg/m3 This value is for inhalable dust containing no asbestos and <1 % crystalline silica.
	NATIONAL	HUNGARY	Long Term: 10 mg/m3 inhalable aerosol Source: 5/2020. (II. 6.) ITM
	NATIONAL	IRELAND	Long Term: 10 mg/m3 Inhalable fraction Source: 2021 Code of Practice
	NATIONAL	IRELAND	Long Term: 4 mg/m3 Respirable fraction Source: 2021 Code of Practice
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m3 inhalable aerosol Source: EH40/2005 Workplace exposure limits
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m3 respirable aerosol Source: EH40/2005 Workplace exposure limits
	NATIONAL	CROATIA	Long Term: 10 mg/m3 U Source: NN 1/2021
	NATIONAL	CROATIA	Long Term: 4 mg/m3 R Source: NN 1/2021
	NATIONAL	FRANCE	Long Term: 10 mg/m3 Source: INRS outil65
	NATIONAL	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
	NATIONAL	POLAND	Long Term: 10 mg/m3 4) Source: Dz.U. 2018 poz. 1286
Aluminium oxide CAS: 1344-28-1	SUVA	SWITZERLAND	Long Term: 3 mg/m3 TWA mg/m3: (a), Formel / Formal, NIOSH Source: suva.ch/valeurs-limites
	NATIONAL	AUSTRALIA	Long Term: 10 mg/m3 (8h) Inhalable dust containing no asbestos and < 1% crystalline silica

NATIONAL	BELGIUM	Long Term: 1 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 10 mg/m ³ U Source: NN 1/2021
NATIONAL	CROATIA	Long Term: 4 mg/m ³ R Source: NN 1/2021
NATIONAL	ROMANIA	Long Term: 2 mg/m ³ ; Short Term: 5 mg/m ³ (Aerosoli) Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SPAIN	Long Term: 10 mg/m ³ véase Capítulo 9 Source: LEP 2022
NATIONAL	AUSTRIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 60(Miw), 2x, A Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	AUSTRIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 60(Miw), 2x, MAK, A Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	DENMARK	Long Term: 5 mg/m ³ Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 4 mg/m ³ 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FRANCE	Long Term: 10 mg/m ³ Source: INRS outil65
NATIONAL	GREECE	Long Term: 10 mg/m ³ εισπν Source: ΦΕΚ 94/A` 13.5.1999
NATIONAL	GREECE	Long Term: 5 mg/m ³ αvapn Source: ΦΕΚ 94/A` 13.5.1999
NATIONAL	HUNGARY	Long Term: 5 mg/m ³ N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	HUNGARY	Long Term: 2 mg/m ³ resp, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	LATVIA	Long Term: 6 mg/m ³ Source: KN325P1
NATIONAL	LATVIA	Long Term: 4 mg/m ³ Source: KN325P1
NATIONAL	NORWAY	Long Term: 10 mg/m ³ 1 Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 2.5 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
NATIONAL	POLAND	Long Term: 1.2 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286
NATIONAL	SLOVAKIA	Long Term: 4 mg/m ³ 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
SUVA	SWITZERLAN D	Long Term: 3 mg/m ³ TWA mg/m ³ : (a), B, Formel / Formal, NIOSH Source: suva.ch/valeurs-limites

methanol
CAS: 67-56-1

SUVA	SWITZERLAND	Long Term: 3 mg/m ³ ; Short Term: 24 mg/m ³ TWA mg/m ³ : (a), Fimétal / Metallrauch, NIOSH Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m ³ Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
ACGIH		Long Term: 200 ppm (8h); Short Term: 250 ppm Skin, BEI - Headache, eye dam, dizziness, nausea
EU		Long Term: 260 mg/m ³ - 200 ppm (8h) Skin
NATIONAL	AUSTRIA	Long Term: 260 mg/m ³ - 200 ppm; Short Term: 1040 mg/m ³ - 800 ppm 15(Miw), 4x, MAK, H Source: BGBl. II Nr. 156/2021
NATIONAL	BULGARIA	Long Term: 260 mg/m ³ - 200 ppm Кожа Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
NATIONAL	CZECHIA	Long Term: 250 mg/m ³ ; Short Term: Ceiling - 1000 mg/m ³ D, B Source: Nařízení vlády č. 361-2007 Sb
NATIONAL	DENMARK	Long Term: 260 mg/m ³ - 200 ppm EH Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 250 mg/m ³ - 200 ppm; Short Term: 350 mg/m ³ - 250 ppm A Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 270 mg/m ³ - 200 ppm; Short Term: 330 mg/m ³ - 250 ppm iho Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 260 mg/m ³ - 200 ppm; Short Term: 1300 mg/m ³ - 1000 ppm Risque de pénétration percutanée Source: INRS outil65, article R. 4412-149 du Code du travail
NATIONAL	GREECE	Long Term: 260 mg/m ³ - 200 ppm; Short Term: 325 mg/m ³ - 250 ppm Δ Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 260 mg/m ³ b, i, BEM, EU2, R+T Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	LITHUANIA	Long Term: 260 mg/m ³ - 200 ppm O Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	NETHERLANDS	Long Term: 133 mg/m ³ H Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 130 mg/m ³ - 100 ppm H E Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 100 mg/m ³ ; Short Term: 300 mg/m ³ skóra Source: Dz.U. 2018 poz. 1286
NATIONAL	SLOVAKIA	Long Term: 260 mg/m ³ - 200 ppm K, 7) Source: 355 NARIADENIE VLÁDY z 10. mája 2006

NATIONAL	SWEDEN	Long Term: 250 mg/m3 - 200 ppm; Short Term: 350 mg/m3 - 250 ppm H, V Source: AFS 2021:3
SUVA	SWITZERLAND	Long Term: 260 mg/m3 - 200 ppm; Short Term: 520 mg/m3 - 400 ppm R/H, SSC, B, SNC / ZNS, INRS NIOSH Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 266 mg/m3 - 200 ppm; Short Term: 333 mg/m3 - 250 ppm Sk Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 266 mg/m3 - 200 ppm; Short Term: 333 mg/m3 - 250 ppm D Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 260 mg/m3 - 200 ppm koža Source: 2006/15/EZ
NATIONAL	CYPRUS	Long Term: 260 mg/m3 - 200 ppm δέρμα Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	GERMANY	Long Term: 130 mg/m3 - 100 ppm DFG, EU, H, Y, 2(II) Source: TRGS 900
NATIONAL	IRELAND	Long Term: 260 mg/m3 - 200 ppm Sk, IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 260 mg/m3 - 200 ppm Cute Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 260 mg/m3 - 200 ppm Āda Source: KN325P1
NATIONAL	LUXEMBOURG	Long Term: 260 mg/m3 - 200 ppm Peau Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 260 mg/m3 - 200 ppm skin Source: S.L.424.24
NATIONAL	PORTUGAL	Long Term: 260 mg/m3 - 200 ppm Cutânea Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 260 mg/m3 - 200 ppm P, Dir. 2006/15 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 260 mg/m3 - 200 ppm; Short Term: 1040 mg/m3 - 800 ppm K, Y, BAT, EU2 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 266 mg/m3 - 200 ppm vía dérmica, VLB®, VLI, r Source: LEP 2022
1-methoxy-2-propanol; monopropylene glycol methyl ether CAS: 107-98-2	ACGIH	Long Term: 50 ppm (8h); Short Term: 100 ppm A4 - Eye and URT irr
	EU	Long Term: 375 mg/m3 - 100 ppm (8h); Short Term: 563 mg/m3 - 150 ppm Skin
	NATIONAL AUSTRIA	Long Term: 187 mg/m3 - 50 ppm; Short Term: Ceiling - 187 mg/m3 - 50 ppm Mow, MAK, H Source: BGBl. II Nr. 156/2021

NATIONAL	BULGARIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm Кожа Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
NATIONAL	CZECHIA	Long Term: 270 mg/m ³ ; Short Term: Ceiling - 550 mg/m ³ D Source: Nařízení vlády č. 361-2007 Sb
NATIONAL	DENMARK	Long Term: 185 mg/m ³ - 50 ppm EH Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm A, S Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 370 mg/m ³ - 100 ppm; Short Term: 560 mg/m ³ - 150 ppm iho Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 188 mg/m ³ - 50 ppm; Short Term: 375 mg/m ³ - 100 ppm Risque de pénétration percutanée Source: INRS outil65, article R. 4412-149 du Code du travail
NATIONAL	GREECE	Long Term: 360 mg/m ³ - 100 ppm; Short Term: 1080 mg/m ³ - 300 ppm Δ Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 375 mg/m ³ ; Short Term: 568 mg/m ³ b, EU1, R+T Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	LITHUANIA	Long Term: 190 mg/m ³ - 50 ppm; Short Term: 300 mg/m ³ - 75 ppm Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	NETHERLAND S	Long Term: 375 mg/m ³ ; Short Term: 563 mg/m ³ H Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 180 mg/m ³ - 50 ppm H E Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 180 mg/m ³ ; Short Term: 360 mg/m ³ skóra Source: Dz.U. 2018 poz. 1286
NATIONAL	SLOVAKIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm K Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SWEDEN	Long Term: 190 mg/m ³ - 50 ppm; Short Term: 568 mg/m ³ - 150 ppm H Source: AFS 2021:3
SUVA	SWITZERLAND D	Long Term: 360 mg/m ³ - 100 ppm; Short Term: 720 mg/m ³ - 200 ppm SSC, B, VRS Yeux / OAW Auge Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 560 mg/m ³ - 150 ppm Sk Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 184 mg/m ³ - 50 ppm; Short Term: 369 mg/m ³ - 100 ppm D Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm Source: 2000/39/EZ
NATIONAL	CYPRUS	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm δέρμα Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	GERMANY	Long Term: 370 mg/m ³ - 100 ppm DFG, EU, Y, 2(I)

		Source: TRGS 900
NATIONAL	IRELAND	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm Cute Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm Āda Source: KN325P1
NATIONAL	LUXEMBOURG	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm Peau Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm skin Source: S.L.424.24
NATIONAL	PORTUGAL	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm P, Dir. 2000/39 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm K, Y, BAT, EU1 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 375 mg/m ³ - 100 ppm; Short Term: 568 mg/m ³ - 150 ppm vía dérmica, VLI Source: LEP 2022
2-octyl-2H-isothiazol-3-one CAS: 26530-20-1	NATIONAL AUSTRIA	Long Term: 0.05 mg/m ³ ; Short Term: Ceiling - 0.05 mg/m ³ Mow, MAK, H, S, E Source: BGBl. II Nr. 156/2021
	SUVA SWITZERLAND	Long Term: 0.05 mg/m ³ ; Short Term: 0.1 mg/m ³ TWA mg/m ³ : (i), R/H, S, VRS / OAW Source: suva.ch/valeurs-limites
	NATIONAL GERMANY	Long Term: 0.05 mg/m ³ DFG, H, Y, E, 2(I) Source: TRGS 900
	NATIONAL SLOVENIA	Long Term: 0.05 mg/m ³ ; Short Term: 0.1 mg/m ³ K, Y, (I) Source: UL št. 72, 11. 5. 2021
Diisooctyl 2,2'- [[diocetylstannylene]bis(thio)] diacetate CAS: 26401-97-8	NATIONAL AUSTRIA	siehe Zinnverbindungen, organische Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL AUSTRIA	Long Term: 0.1 mg/m ³ ; Short Term: 0.2 mg/m ³ 15(Miw), 4x, MAK, D, H, E, als Sn berechnet siehe auch Tri-n-butylzinn- verbindungen Source: BGBl. II Nr. 156/2021

Biological limit values

methanol CAS: 67-56-1	Biological Indicator: Methyl alcohol; Sampling Period: End of turn; End of working week Value: 30 mg/L; Medium: Urine
1-methoxy-2-propanol; monopropylene glycol methyl ether CAS: 107-98-2	Biological Indicator: 1-Methoxypropanol-2; Sampling Period: End of turn Value: 20 mg/L; Medium: Urine

Predicted No Effect Concentration (PNEC) values

Trimethoxyphenylsilane CAS: 2996-92-1	Exposure Route: Fresh Water; PNEC Limit: 240 µg/l
	Exposure Route: Intermittent releases (fresh water); PNEC Limit: 2.4 mg/l
	Exposure Route: Marine water; PNEC Limit: 24 µg/l
	Exposure Route: Intermittent releases (marine water); PNEC Limit: 2.4 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 74 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 1.1 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 110 µg/kg

Exposure Route: Soil; PNEC Limit: 80 µg/kg

Exposure Route: Fresh Water; PNEC Limit: 2.2 µg/l

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate
CAS: 1065336-91-5

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 9 µg/l

Exposure Route: Marine water; PNEC Limit: 220 ng/L

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 1.05 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 110 µg/kg

Exposure Route: Soil; PNEC Limit: 210 µg/kg

Exposure Route: Fresh Water; PNEC Limit: 20.8 mg/l

methanol
CAS: 67-56-1

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1540 mg/l

Exposure Route: Marine water; PNEC Limit: 2.08 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 77 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 7.7 mg/kg

Exposure Route: Soil; PNEC Limit: 100 mg/kg

Exposure Route: Fresh Water; PNEC Limit: 10 mg/l

1-methoxy-2-propanol; monopropylene glycol methyl ether
CAS: 107-98-2

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 100 mg/l

Exposure Route: Marine water; PNEC Limit: 1 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 52.3 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 5.2 mg/kg

Exposure Route: Soil; PNEC Limit: 4.59 mg/kg

Exposure Route: Fresh Water; PNEC Limit: 2.2 µg/l

2-octyl-2H-isothiazol-3-one
CAS: 26530-20-1

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1.22 µg/l

Exposure Route: Marine water; PNEC Limit: 220 ng/L

Exposure Route: Intermittent releases (marine water); PNEC Limit: 122 ng/L

Exposure Route: Freshwater sediments; PNEC Limit: 47.5 µg/kg

Exposure Route: Marine water sediments; PNEC Limit: 47.5 µg/kg

Exposure Route: Soil; PNEC Limit: 8.2 µg/kg

Derived No Effect Level (DNEL) values

Trimethoxyphenylsilane
CAS: 2996-92-1

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 40.2 mg/m³; Consumer: 10 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 260 mg/m³; Consumer: 50 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 260 mg/m³; Consumer: 50 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 260 mg/m³; Consumer: 50 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 2.5 mg/kg; Consumer: 1.73 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects

Consumer: 33.3 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 700 µg/kg

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate
bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate
CAS: 1065336-91-5

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 680 µg/m³; Consumer: 170 µg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 500 µg/kg; Consumer: 250 µg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 50 µg/kg

methanol
CAS: 67-56-1

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 130 mg/m³; Consumer: 26 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 130 mg/m³; Consumer: 26 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 130 mg/m³; Consumer: 26 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 130 mg/m³; Consumer: 26 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 20 mg/kg; Consumer: 4 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 20 mg/kg; Consumer: 4 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 4 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 4 mg/kg

1-methoxy-2-propanol;
monopropylene glycol
methyl ether
CAS: 107-98-2

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 369 mg/m³; Consumer: 43.9 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 553.5 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 553.5 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 183 mg/kg; Consumer: 78 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 33 mg/kg

8.2. Exposure controls

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:

Neoprene, Nitrile rubber.

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: White
Odour: N.A.
Odour threshold: N.A.
pH: Not Relevant
Kinematic viscosity: N.A.
Melting point/freezing point: N.A.
Boiling point or initial boiling point and boiling range: N.A.
Flash point: > 93°C
Lower and upper explosion limit: N.A.
Relative vapour density: N.A.
Vapour pressure: N.A.
Density and/or relative density: 1.48 g/cm³
Solubility in water: Insoluble
Solubility in oil: N.A.
Partition coefficient n-octanol/water (log value): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Flammability: N.A.
Volatile Organic compounds - VOCs = 0.15 % ; 2.29 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1A(H317)
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified

j) aspiration hazard Based on available data, the classification criteria are not met
Not classified
Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

Trimethoxyphenylsilane	a) acute toxicity	LD50 Oral Rat = 1049 mg/kg LD50 Skin Rabbit = 3014 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Rat Negative	Inhalation route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 500 mg/kg	
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	a) acute toxicity	LD50 Oral Rat = 3230 mg/kg LD50 Skin Rat > 3170 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 30 mg/kg	
methanol	a) acute toxicity	LD50 Oral Rat >= 2528 mg/kg LC50 Inhalation = 43.68 mg/l 6h LD50 Skin Rabbit = 17100 mg/kg	Cat
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative Carcinogenicity Rat Negative	Mouse intraperitoneal route
	g) reproductive toxicity	Lowest Observed Adverse Effect Level Oral = 1000 mg/kg	Mouse
1-methoxy-2-propanol; monopropylene glycol methyl ether	a) acute toxicity	LD50 Oral Rat = 4016 mg/kg LC50 Inhalation Vapour Rat Negative 6h LD50 Skin Rat > 2000 mg/kg	No mortalities observed
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity	Mouse intraperitoneal route

		Carcinogenicity Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 300 ppm
2-octyl-2H-isothiazol-3-one	a) acute toxicity	ATE - Oral : 125 mg/kg bw ATE - Dermal : 311 mg/kg bw LD50 Oral Rat = 125 mg/kg LC50 Inhalation Mist Rat = 0.27 mg/l 4h LD50 Skin Rabbit = 311 mg/kg
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes
	d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Positive

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

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

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Trimethoxyphenylsilane	CAS: 2996-92-1 - EINECS: 221-066-9	a) Aquatic acute toxicity : LC50 Fish <i>Oncorhynchus mykiss</i> = 1400 mg/L 96h OECD Guideline 203 a) Aquatic acute toxicity : EC50 <i>Daphnia magna</i> = 600 mg/L 96h OECD Guideline 202 a) Aquatic acute toxicity : EC50 Algae <i>Pseudokirchnerella subcapitata</i> = 120 mg/L 96h OECD Guideline 201 a) Aquatic acute toxicity : NOEC Sludge activated sludge = 1000 mg/L 3h OECD 209
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	CAS: 1065336-91-5 - EINECS: 915-687-0	a) Aquatic acute toxicity : LC50 Fish <i>Danio rerio</i> = 0.9 mg/L 96h OECD Guideline 203 b) Aquatic chronic toxicity : NOEC <i>Daphnia magna</i> = 1 mg/L OECD guideline 211 a) Aquatic acute toxicity : EC50 Algae <i>Desmodesmus subspicatus</i> = 1.68 mg/L 72h OECD Guideline 201 a) Aquatic acute toxicity : EC20 Sludge activated sludge ≥ 100 mg/L 3h OECD guideline 209
methanol	CAS: 67-56-1 - EINECS: 200-659-6 - INDEX: 603-001-00-X	a) Aquatic acute toxicity : LC50 Fish <i>Lepomis macrochirus</i> = 15400 mg/L 96h b) Aquatic chronic toxicity : NOEC Fish = 450 mg/L a) Aquatic acute toxicity : EC50 <i>Daphnia magna</i> = 22200 mg/L 48h b) Aquatic chronic toxicity : NOEC <i>Daphnia magna</i> = 208 mg/L

a) Aquatic acute toxicity : EC50 Algae Selenastrum capricornutum = 22000 mg/L 96h OECD 201 Guideline.

d) Terrestrial toxicity : NOEC Worm Eisenia andrei = 10000 mg/kg

d) Terrestrial toxicity : NOEC Folsomia candida = 1000 mg/kg OECD Guideline 232

1-methoxy-2-propanol;
monopropylene glycol methyl
ether

CAS: 107-98-2 -
EINECS: 203-
539-1 - INDEX:
603-064-00-3

a) Aquatic acute toxicity : LC50 Fish Leuciscus idus = 6812 mg/L OECD guideline 203

a) Aquatic acute toxicity : LC50 Daphnia = 23300 mg/L 48h OECD guideline 202

a) Aquatic acute toxicity : EC50 Algae = 1000 mg/L OECD guideline 201 - 7days

a) Aquatic acute toxicity : NOEC Sludge = 1000 mg/L OECD guideline 201

2-octyl-2H-isothiazol-3-one

CAS: 26530-20-
1 - EINECS:
247-761-7 -
INDEX: 613-
112-00-5

a) Aquatic acute toxicity : LC50 Fish freshwater fish = 0.122 mg/L dossier ECHA

b) Aquatic chronic toxicity : EC10 Fish = 0.022 mg/L dossier ECHA

a) Aquatic acute toxicity : EC50 freshwater invertebrates = 0.181 mg/L dossier ECHA

b) Aquatic chronic toxicity : EC10 freshwater invertebrates = 0.035 mg/L dossier ECHA

LC50 Algae freshwater algae = 0.15 mg/L

12.2. Persistence and degradability

Component	Persistence/Degradability:	Value	Notes:
Trimethoxyphenylsilane	Non-readily biodegradable		
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	Non-readily biodegradable	38.000	28days
methanol	Readily biodegradable		
1-methoxy-2-propanol; monopropylene glycol methyl ether	Readily biodegradable	69.000	28days
2-octyl-2H-isothiazol-3-one	Non-readily biodegradable		

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value	Notes:
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	Not bioaccumulative			
methanol	Not bioaccumulative	BCF - Bioconcentration factor		< 10
2-octyl-2H-isothiazol-3-one	Bioaccumulative	BCF - Bioconcentration factor	19.210	L/kg ww

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration $\geq 0.1\%$

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force. Disposal through discharge into wastewater is not permitted

A waste code according to the European List of Wastes (LoW) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

The product disposed of as such, pursuant to Regulation (EU) 1357/2014, must be classified as hazardous waste

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Technical name: N/A

IMDG-Technical name: N/A

14.3. Transport hazard class(es)

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

N.A.

IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

ADR-Transport category (Tunnel restriction code): N/A

ADR Limited Quantities: N/A

ADR Excepted Quantities: N/A

Air (IATA):

IATA-Passenger Aircraft: N/A

IATA-Cargo Aircraft: N/A

IATA-Label: N/A

IATA-Subsidiary hazards: N/A

IATA-Erg: N/A

IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage Code: N/A

IMDG-Stowage Note: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)
Regulation (EU) n. 2020/878
Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 40, 52, 69, 75

Provisions related to directive EU 2012/18 (Seveso III):

None

Explosives precursors – Regulation 2019/1148

No substances listed

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

3: Severe hazard to waters

German Lagerklasse according to TRGS 510:

LGK 10

SVHC Substances:

No SVHC substances present in concentration $\geq 0.1\%$

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

Trimethoxyphenylsilane

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate

SECTION 16: Other information

Code	Description
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3

3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/1	STOT SE 1	Specific target organ toxicity — single exposure, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

Skin Sens. 1A, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

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.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

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

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

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

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

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.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
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.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 15: Regulatory information

Exposure Scenario

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate
bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate

Exposure Scenario, 20/04/2022

Substance identity	
	1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate
CAS No.	1065336-91-5
EINECS No.	915-687-0

Table of contents

1. **ES 1** Widespread use by professional workers; Various products (PC9a, PC9b)

1. ES 1		Widespread use by professional workers; Various products (PC9a, PC9b)	
1.1 TITLE SECTION			
Exposure Scenario name	Professional application of coatings and inks - Use in rigid foams, coatings, adhesives and sealants		
Date - Version	20/04/2022 - 1.0		
Life Cycle Stage	Widespread use by professional workers		
Main user group	Professional uses		
Sector(s) of use	Professional uses (SU22)		
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Fillers, putties, plasters, modelling clay (PC9b)		
Environment Contributing Scenario			
CS1	ERC8c		
Worker Contributing Scenario			
CS2 Material transfers	PROC8a		
CS3 Rolling, Brushing	PROC10		
1.2 Conditions of use affecting exposure			
1.2. CS1: Environment Contributing Scenario (ERC8c)			
Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) (ERC8c)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Vapour pressure: Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa			
<i>Amount used, frequency and duration of use (or from service life)</i>			
Emission days: 365 days per year			
<i>Technical and organisational conditions and measures</i>			
Control measures to prevent releases			
		Air - minimum efficiency of: 15 % Water - minimum efficiency of: 1 %	
<i>Conditions and measures related to sewage treatment plant</i>			
STP type: Municipal Sewage Treatment Plant Water - minimum efficiency of: = 88.9 %			
STP effluent (m³/day): 2000			
<i>Other conditions affecting environmental exposure</i>			
Local marine water dilution factor: 100 Local freshwater dilution factor: 10 Receiving surface water flow: 18000 m³/day Indoor use			
1.2. CS2: Worker Contributing Scenario: Material transfers (PROC8a)			

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)	
<i>Product (article) characteristics</i>		
Physical form of product: Liquid		
Vapour pressure: Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa		
Concentration of substance in product: Covers percentage substance in the product up to 5 %.		
<i>Amount used, frequency and duration of use/exposure</i>		
Duration: Covers use up to 480 min		
Frequency: Covers use up to 5 days per week		
<i>Technical and organisational conditions and measures</i>		
Technical and organisational measures Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed. Ensure operatives are trained to minimise exposures.		
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>		
Personal protection		
Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training.		Dermal - minimum efficiency of: = 90 %
Wear suitable face shield. Wear suitable coveralls to prevent exposure to the skin.		
<i>Other conditions affecting worker exposure</i>		
Indoor use Professional use		
<i>Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.</i>		
Additional Good Practice Advice: Ensure no splashing occurs during transfer.		
1.2. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)		
Process Categories	Roller application or brushing (PROC10)	
<i>Product (article) characteristics</i>		
Physical form of product: Liquid		
Vapour pressure: Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa		
Concentration of substance in product: Covers percentage substance in the product up to 5 %.		
<i>Amount used, frequency and duration of use/exposure</i>		
Duration: Covers use up to 480 min		
Frequency: Covers use up to 5 days per week		
<i>Technical and organisational conditions and measures</i>		
Technical and organisational measures		

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.
Ensure operatives are trained to minimise exposures.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training.	Dermal - minimum efficiency of: = 90 %
Wear suitable face shield. Wear suitable coveralls to prevent exposure to the skin.	

Other conditions affecting worker exposure

Indoor use
Professional use

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Ensure no splashing occurs during transfer.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8c)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
soil	N/A	ECETOC TRA environment v2.0	0.0579

Additional information on exposure estimation:

Risk from environmental exposure is driven by soil.

1.3. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	= 0.2743 mg/kg bw/day	ECETOC TRA worker v3	= 0.137143
inhalative, systemic, long-term	= 0.4233 mg/m ³	ECETOC TRA worker v3	= 0.119924

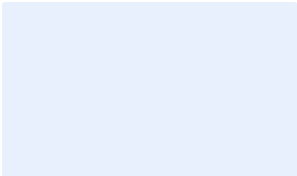
1.3. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	= 0.5486 mg/kg bw/day	ECETOC TRA worker v3	= 0.274286
inhalative, systemic, long-term	= 0.274286 mg/m ³	ECETOC TRA worker v3	= 0.097

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure Scenario

Trimethoxyphenylsilane

Exposure Scenario, 15/06/2022

Substance identity	
	Trimethoxyphenylsilane
CAS No.	2996-92-1
EINECS No.	221-066-9
Registration number	01-2119964479-19

Table of contents

1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a); Building and construction work (SU19)

1. ES 1

Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a); Building and construction work (SU19)

1.1 TITLE SECTION

Exposure Scenario name	Use in rigid foams, coatings, adhesives and sealants
Date - Version	15/06/2022 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22) - Building and construction work (SU19)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1	ERC8c - ERC8f
-----	---------------

Worker Contributing Scenario

CS2 Rolling, Brushing - Mixing operations	PROC10 - PROC19
CS3 Roller, spreader, flow application	PROC11

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8c, ERC8f)

Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC8c, ERC8f)
----------------------------------	---

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 Pa (Standard Temperature and Pressure)

Vapour pressure:

= 18.2 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage = 1 t

Emission days: 365 days per year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

STP effluent (m³/day): 2000*Other conditions affecting environmental exposure*

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

1.2. CS2: Worker Contributing Scenario: Rolling, Brushing - Mixing operations (PROC10, PROC19)

Process Categories	Roller application or brushing - Manual activities involving hand contact (PROC10, PROC19)
--------------------	--

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 Pa (Standard Temperature and Pressure)

Vapour pressure:

= 18.2 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

*Amount used, frequency and duration of use/exposure***Duration:**

Covers daily exposures up to 8 hours

Frequency:

Covers exposure up to days per week

*Technical and organisational conditions and measures***Technical and organisational measures**

Open windows during application to ensure natural ventilation.

*Conditions and measures related to personal protection, hygiene and health evaluation***Personal protection**

Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training.

Dermal - minimum efficiency of: 80 %

1.2. CS3: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)**Process Categories**

Non industrial spraying (PROC11)

*Product (article) characteristics***Physical form of product:**

Liquid, vapour pressure > 10 Pa (Standard Temperature and Pressure)

Vapour pressure:

= 18.2 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

*Amount used, frequency and duration of use/exposure***Duration:**

Covers daily exposures up to 8 hours

Frequency:

Covers exposure up to days per week

*Technical and organisational conditions and measures***Technical and organisational measures**

Open windows during application to ensure natural ventilation.

*Conditions and measures related to personal protection, hygiene and health evaluation***Personal protection**

Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training.

Dermal - minimum efficiency of: 80 %

1.3 Exposure estimation and reference to its source**1.3. CS1: Environment Contributing Scenario (ERC8c, ERC8f)**

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.00056 mg/L	EUSES v2.1	0.0023

marine water	5.5E-05 mg/L	EUSES v2.1	0.0023
freshwater sediment	0.00047 mg/kg wet weight	EUSES v2.1	0.002
marine sediment	4.6E-05 mg/kg wet weight	EUSES v2.1	0.0019
soil	0.000217 mg/kg wet weight	EUSES v2.1	0.0031
Sewage treatment plant	< 1E-06 mg/L	EUSES v2.1	< 1E-06

1.3. CS2: Worker Contributing Scenario: Rolling, Brushing - Mixing operations (PROC10, PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	2.85 mg/m ³	Stoffenmanager v5.6.10	0.071
dermal, long-term	0.0274 mg/kg bw/day	ECETOC TRA worker v3	0.011

1.3. CS3: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	9.66 mg/m ³	Stoffenmanager v5.6.10	0.24
dermal, long-term	0.0429 mg/kg bw/day	ECETOC TRA worker v3	0.017

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.