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

1.1. Product identifier

Mixture identification:

Trade name: RESYBRID 50 FC

Trade code: SF00133- 04

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 France

25, avenue de l'Industrie - 69960 Corbas - France

Tel. +33 472 890 684

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Emergency medical information: (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland.

Members of the public Number (8 am-10 pm): +353 (0)1 809 2166

Healthcare professional telephone Number (24hrs): +353 (0)1 809 2566

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)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Special Provisions:

EUH208	Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.
EUH208	Contains Trimethoxyvinilsilane. May produce an allergic reaction.
EUH208	Contains 1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

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

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥1-<3 %	Fatty acids, C16-18	CAS:67701-03-5 EC:266-928-5	Skin Irrit. 2, H315; Eye Irrit. 2, H319	
≥0.5-<1 %	N-(3-(trimethoxysilyl)propyl) ethylenediamine	CAS:1760-24-3 EC:217-164-6	Eye Dam. 1, H318; Skin Sens. 1, H317; Acute Tox. 4, H332	01-2119970215-39
≥0.5-<1 %	Trimethoxyvinilsilane	CAS:2768-02-7 EC:220-449-8 Index:014-049-00-0	Skin Sens. 1B, H317; Flam. Liq. 2, H225; Acute Tox. 4, H332	01-2119513215-52
≥0.05-<0.1 %	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

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

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

N.A.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

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.

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)

	OEL Type	Country	Occupational Exposure Limit
CAS: 471-34-1	NATIONAL	AUSTRALIA	Long Term: 10 mg/m3 This value is for inhalable dust containing no asbestos and <1 % crystalline silica.
	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	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	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
	NATIONAL	POLAND	Long Term: 10 mg/m3 4) Source: Dz.U. 2018 poz. 1286
	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	Long Term: 4 mg/m3 respirable aerosol Source: EH40/2005 Workplace exposure limits

		BRITAIN AND NORTHERN IRELAND	
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: Narízení vlády c. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 3 mg/m3 Source: BEK nr 2203 af 29/11/2021
Aluminium oxide CAS: 1344-28-1	NATIONAL	AUSTRALIA	Long Term: 10 mg/m3 (8h) Inhalable dust containing no asbestos and < 1% crystalline silica
	NATIONAL	AUSTRIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 60(Miw), 2x, A Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	AUSTRIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 60(Miw), 2x, MAK, A Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 1 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	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	DENMARK	Long Term: 5 mg/m3 Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 4 mg/m3 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FRANCE	Long Term: 10 mg/m3 Source: INRS outil65
	NATIONAL	GREECE	Long Term: 10 mg/m3 e?sp? Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	GREECE	Long Term: 5 mg/m3 a?ap? Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 5 mg/m3 N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	HUNGARY	Long Term: 2 mg/m3 resp, N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
	NATIONAL	LATVIA	Long Term: 4 mg/m3 Source: KN325P1
	NATIONAL	NORWAY	Long Term: 10 mg/m3 1 Source: FOR-2021-06-28-2248

	NATIONAL	POLAND	Long Term: 2.5 mg/m3 4) Source: Dz.U. 2018 poz. 1286
	NATIONAL	POLAND	Long Term: 1.2 mg/m3 6) Source: Dz.U. 2018 poz. 1286
	NATIONAL	ROMANIA	Long Term: 2 mg/m3; Short Term: 5 mg/m3 (Aerosoli) Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVAKIA	Long Term: 4 mg/m3 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SPAIN	Long Term: 10 mg/m3 véase Capítulo 9 Source: LEP 2022
propan-2-ol; isopropyl alcohol; isopropanol CAS: 67-63-0	NATIONAL	AUSTRALIA	Long Term: 983 mg/m3 - 400 ppm (8h); Short Term: 1230 mg/m3 - 500 ppm
	ACGIH		Long Term: 200 ppm (8h); Short Term: 400 ppm A4, BEI - Eye and URT irr, CNS impair
	NATIONAL	AUSTRIA	Long Term: 500 mg/m3 - 200 ppm; Short Term: 2000 mg/m3 - 800 ppm 15(Miw), 4x, MAK Source: BGBl. II Nr. 156/2021
	NATIONAL	BULGARIA	Long Term: 980 mg/m3; Short Term: 1225 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
	NATIONAL	CZECHIA	Long Term: 500 mg/m3; Short Term: Ceiling - 1000 mg/m3 I Source: Narízení vlády c. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 490 mg/m3 - 200 ppm Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 350 mg/m3 - 150 ppm; Short Term: 600 mg/m3 - 250 ppm Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 500 mg/m3 - 200 ppm; Short Term: 620 mg/m3 - 250 ppm Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Short Term: 980 mg/m3 - 400 ppm Source: INRS outil65
	NATIONAL	GREECE	Long Term: 980 mg/m3 - 400 ppm; Short Term: 1225 mg/m3 - 500 ppm Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 500 mg/m3; Short Term: 1000 mg/m3 b, i, R Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	LATVIA	Long Term: 350 mg/m3; Short Term: 600 mg/m3 Source: KN325P1
	NATIONAL	LITHUANIA	Long Term: 350 mg/m3 - 150 ppm; Short Term: 600 mg/m3 - 250 ppm Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
	NATIONAL	NORWAY	Long Term: 245 mg/m3 - 100 ppm Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 900 mg/m3; Short Term: 1200 mg/m3 skóra Source: Dz.U. 2018 poz. 1286
	NATIONAL	SLOVAKIA	Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SWEDEN	Long Term: 350 mg/m3 - 150 ppm; Short Term: 600 mg/m3 - 250 ppm V Source: AFS 2021:3
	NATIONAL	BELGIUM	Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1

	NATIONAL	CROATIA	Long Term: 999 mg/m3 - 400 ppm; Short Term: 1250 mg/m3 - 500 ppm Source: NN 1/2021
	NATIONAL	GERMANY	Long Term: 500 mg/m3 - 200 ppm DFG, Y, 2(II) Source: TRGS 900
	NATIONAL	IRELAND	Long Term: 200 ppm; Short Term: 400 ppm Sk Source: 2021 Code of Practice
	NATIONAL	ROMANIA	Long Term: 200 mg/m3 - 81 ppm; Short Term: 500 mg/m3 - 203 ppm Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVENIA	Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm Y, BAT Source: UL št. 72, 11. 5. 2021
	NATIONAL	SPAIN	Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm VLB®, s Source: LEP 2022
Dibutyltin dilaurate CAS: 77-58-7	NATIONAL	AUSTRIA	F, D Source: GKV, BGBl. II Nr. 156/2021
2,2',2''-nitrilotriethanol CAS: 102-71-6	ACGIH		Long Term: 5 mg/m3 (8h) Eye and skin irr
	NATIONAL	BELGIUM	Long Term: 5 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	GERMANY	Long Term: 1 mg/m3 DFG, Y, E, 1 (I) Source: TRGS 900
	NATIONAL	IRELAND	Long Term: 5 mg/m3 Source: 2021 Code of Practice
	NATIONAL	SPAIN	Long Term: 5 mg/m3 Source: LEP 2022
	NATIONAL	AUSTRIA	Long Term: 5 mg/m3 - 0.8 ppm; Short Term: 10 mg/m3 - 1.6 ppm 15(Miw), 4x, MAK, S, E Source: BGBl. II Nr. 156/2021
	NATIONAL	CZECHIA	Long Term: 5 mg/m3; Short Term: Ceiling - 10 mg/m3 D, I Source: Narízení vlády c. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 3.1 mg/m3 - 0.5 ppm Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 S Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 5 mg/m3 Source: HTP-ARVOT 2020
	NATIONAL	LITHUANIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 J Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
	NATIONAL	NORWAY	Long Term: 5 mg/m3 Source: FOR-2021-06-28-2248
	NATIONAL	SWEDEN	Long Term: 5 mg/m3 - 0.8 ppm; Short Term: 10 mg/m3 - 1.6 ppm H, V Source: AFS 2021:3
Carbon black CAS: 1333-86-4	ACGIH		Long Term: 3 mg/m3 (8h) I, A3 - Bronchitis
	NATIONAL	AUSTRALIA	Long Term: 3 mg/m3
	NATIONAL	BELGIUM	Long Term: 3 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	CROATIA	Long Term: 3.5 mg/m3; Short Term: 7 mg/m3 Source: NN 1/2021

	NATIONAL	DENMARK	Long Term: 3.5 mg/m3 K Source: BEK nr 2203 af 29/11/2021
	NATIONAL	FINLAND	Long Term: 3.5 mg/m3; Short Term: 7 mg/m3 Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 3.5 mg/m3 Source: INRS outil65
	NATIONAL	GREECE	Long Term: 3.5 mg/m3; Short Term: 7 mg/m3 Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 3 mg/m3 belélegezheto koncentráció Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND	Long Term: 3 mg/m3 I Source: 2021 Code of Practice
	NATIONAL	NORWAY	Long Term: 3.5 mg/m3 Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 4 mg/m3 4) Source: Dz.U. 2018 poz. 1286
	NATIONAL	SPAIN	Long Term: 3.5 mg/m3 Source: LEP 2022
	NATIONAL	SWEDEN	Long Term: 3 mg/m3 Source: AFS 2021:3
methanol CAS: 67-56-1	ACGIH		Long Term: 200 ppm (8h); Short Term: 250 ppm Skin, BEI - Headache, eye dam, dizziness, nausea
	EU		Long Term: 260 mg/m3 - 200 ppm (8h) Skin
	NATIONAL	AUSTRIA	Long Term: 260 mg/m3 - 200 ppm; Short Term: 1040 mg/m3 - 800 ppm 15(Miw), 4x, MAK, H Source: BGBl. II Nr. 156/2021
	NATIONAL	BULGARIA	Long Term: 260 mg/m3 - 200 ppm ???? Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
	NATIONAL	CZECHIA	Long Term: 250 mg/m3; Short Term: Ceiling - 1000 mg/m3 D, B Source: Narízení vlády c. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 260 mg/m3 - 200 ppm EH Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 250 mg/m3 - 200 ppm; Short Term: 350 mg/m3 - 250 ppm A Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 270 mg/m3 - 200 ppm; Short Term: 330 mg/m3 - 250 ppm iho Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 260 mg/m3 - 200 ppm; Short Term: 1300 mg/m3 - 1000 ppm Risque de pénétration percutanée Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL	GREECE	Long Term: 260 mg/m3 - 200 ppm; Short Term: 325 mg/m3 - 250 ppm ? Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 260 mg/m3 b, i, BEM, EU2, R+T Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	LITHUANIA	Long Term: 260 mg/m3 - 200 ppm O Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389

	NATIONAL	NETHERLANDS	Long Term: 133 mg/m3 H Source: Arbeidsomstandighedenregeling - Lijst A
	NATIONAL	NORWAY	Long Term: 130 mg/m3 - 100 ppm H E Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 100 mg/m3; Short Term: 300 mg/m3 skóra Source: Dz.U. 2018 poz. 1286
	NATIONAL	SLOVAKIA	Long Term: 260 mg/m3 - 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
	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 d??µa 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 Ada 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
Diisooctyl 2,2'-[(dioctylstannylene)bis(thio)] diacetate CAS: 26401-97-8	NATIONAL	GERMANY	Long Term: 0.01 mg/m3 - 0.002 ppm (8h); Short Term: 0.02 mg/m3 - 0.004 ppm (15min) Long term and short term: inhalable fraction and vapour
	NATIONAL	AUSTRALIA	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
	NATIONAL	BELGIUM	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)

NATIONAL	BULGARIA	Long Term: 0.1 mg/m3 (8h)
NATIONAL	CZECHIA	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	CROATIA	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	DENMARK	Long Term: 0.1 mg/m3 (8h)
NATIONAL	ESTONIA	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	FINLAND	Long Term: 0.1 mg/m3 (8h); Short Term: 0.3 mg/m3 (15min)
NATIONAL	GREECE	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	IRELAND	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	LITHUANIA	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	PORTUGAL	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	ROMANIA	Long Term: 0.05 mg/m3 (8h); Short Term: 0.15 mg/m3 (15min)
NATIONAL	SLOVAKIA	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	SLOVENIA	Long Term: 0.01 mg/m3 - 0.002 ppm (8h); Short Term: 0.02 mg/m3 - 0.004 ppm (15min)
NATIONAL	SPAIN	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	SWEDEN	Long Term: 0.1 mg/m3 (8h); Short Term: 0.2 mg/m3 (15min)
NATIONAL	SWITZERLAND	Long Term: 0.02 mg/m3 - 0.004 ppm (8h); Short Term: 0.02 mg/m3 - 0.004 ppm (15min)
NATIONAL	HUNGARY	Long Term: 0.1 mg/m3 (8h); Short Term: 0.4 mg/m3 (15min)
NATIONAL	AUSTRIA	siehe Zinnverbindungen, organische Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	AUSTRIA	Long Term: 0.1 mg/m3; Short Term: 0.2 mg/m3 15(Miw), 4x, MAK, D, H, E, als Sn berechnet siehe auch Tri-n-butylzinn- verbindungen Source: BGBl. II Nr. 156/2021

Predicted No Effect Concentration (PNEC) values

N-(3-(trimethoxysilyl)propyl) ethylenediamine CAS: 1760-24-3	Exposure Route: Fresh Water; PNEC Limit: 62 µg/l
	Exposure Route: Intermittent releases (fresh water); PNEC Limit: 620 µg/l
	Exposure Route: Marine water; PNEC Limit: 6.2 µg/l
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 25 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 220 µg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 22 µg/kg
	Exposure Route: Soil; PNEC Limit: 8.5 µg/kg
Trimethoxyvinilsilane CAS: 2768-02-7	Exposure Route: Fresh Water; PNEC Limit: 400 µg/l
	Exposure Route: Intermittent releases (fresh water); PNEC Limit: 2.4 mg/l
	Exposure Route: Marine water; PNEC Limit: 40 µg/l
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 6.6 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 1.5 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 150 µg/kg
	Exposure Route: Soil; PNEC Limit: 60 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: Fresh Water; PNEC Limit: 2.2 µg/l
	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

Derived No Effect Level (DNEL) values

N-(3-(trimethoxysilyl)propyl) ethylenediamine CAS: 1760-24-3	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 260 mg/m³; Consumer: 50 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: 600 µg/m³; Consumer: 100 µg/m³
	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Worker Professional: 5.36 mg/m³; Consumer: 4 mg/m³
	Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 8 mg/kg
Trimethoxyvinilsilane CAS: 2768-02-7	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 27.6 mg/m³; Consumer: 6.7 mg/m³
	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Worker Professional: 260 mg/m³; Consumer: 50 mg/m³
	Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects Worker Professional: 3.9 mg/kg; Consumer: 7.8 mg/kg
	Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 300 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

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Colour: In compliance with the product description

Odour: Light

Odour threshold: N.A.

pH: N.A.

Kinematic viscosity: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: > 300 °C (572 °F)

Flash point: > 60°C / 93°C

Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 1.50 g/cm3
Solubility in water: Miscible
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: 420.00 °C
Decomposition temperature: N.A.
Flammability: N.A.
Volatile Organic compounds - VOCs = 0.31 % ; 4.67 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	Not classified
	Based on available data, the classification criteria are not met
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
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

N-(3-(trimethoxysilyl)propyl) ethylenediamine	a) acute toxicity	LD50 Oral Rat = 2295 mg/kg	
		LC50 Inhalation of aerosol Rat > 1.49 mg/l 4h	<2.44 mg/l

		LD50 Skin Rabbit > 2000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Negative	Mouse intraperitoneal rout
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 500 mg/kg	
Trimethoxyvinilsilane	a) acute toxicity	LD50 Oral Rat = 7.34 ml/Kg	
		LC50 Inhalation Vapour Rat = 2773 Ppm 4h	
		LD50 Skin Rabbit = 3.36 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No 24h	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Rat Negative	Inhalation route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 250 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	

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 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:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
N-(3-(trimethoxysilyl)propyl) ethylenediamine	CAS: 1760-24-3 - EINECS: 217-164-6	a) Aquatic acute toxicity : LC50 Fish Danio rerio = 597 mg/L 96h
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 81 mg/L 48h
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna >= 1 ppm -

		21days
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 8.8 mg/L 72h
		c) Bacteria toxicity : EC50 Pseudomonas putida = 67 mg/L
		d) Terrestrial toxicity : LC50 Worm Eisenia foetida > 1000 mg/kg - 14days
Trimethoxyvinilsilane	CAS: 2768-02-7 - EINECS: 220-449-8 - INDEX: 014-049-00-0	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 137 mg/L 96h
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 121 mg/L 48h
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 20 mg/L - 21days
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata > 89 mg/L 72h
		a) Aquatic acute toxicity : EC10 microorganisms > 100 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 Danio rerio = 0.9 mg/L 96h OECD Guideline 203
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 1 mg/L OECD guideline 211
		a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 1.68 mg/L 72h OECD Guideline 201
		a) Aquatic acute toxicity : EC20 Sludge activated sludge >= 100 mg/L 3h OECD guideline 209

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes:
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Non-readily biodegradable	Dissolved organic carbon	39.000	28days
Trimethoxyvinilsilane	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

12.3. Bioaccumulative potential

Component	Bioaccumulation
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	Not bioaccumulative

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 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

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

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.

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-Shipping Name: N/A

IMDG-Shipping Name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

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 and handling: N/A

IMDG-Segregation: 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: None.

Restrictions related to the substances contained: 30, 40, 52, 69, 75

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

N.A.

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

No substances listed

German Water Hazard Class.

3: Severe hazard to waters

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine

Trimethoxyvinilsilane

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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.7/2	Repr. 2	Reproductive toxicity, 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

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 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other 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)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa

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

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

	Air - minimum efficiency of: 15 % Water - minimum efficiency of: 1 %

Conditions and measures related to sewage treatment plant

STP type:
Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 88.9 %
STP effluent (m³/day): 2000

Other conditions affecting environmental exposure

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)

Product (article) characteristics

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 %.

Amount used, frequency and duration of use/exposure

Duration:
Covers use up to 480 min

Frequency:
Covers use up to 5 days per week

Technical and organisational conditions and measures

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.

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

Process Categories	Roller application or brushing (PROC10)

Product (article) characteristics

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 %.

Amount used, frequency and duration of use/exposure

Duration:
Covers use up to 480 min

Frequency:
Covers use up to 5 days per week

Technical and organisational conditions and measures

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/m³	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/m³	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
N-(3-(trimethoxysilyl)propyl)ethylenediamine

Exposure Scenario, 12/01/2022

Substance identity	
	N-(3-(trimethoxysilyl)propyl)ethylenediamine
CAS No.	1760-24-3
EINECS No.	217-164-6

Table of contents

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

1. ES 1 Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	12/01/2022 - 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)

Environment Contributing Scenario

CS1	ERC8c - ERC8f

Worker Contributing Scenario

CS2 Rolling, Brushing - Roller, spreader, flow application - Manual	PROC10 - PROC11 - PROC19

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

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:
Daily amount per site <= 1.37 kg/day
Annual site tonnage <= 0.5 tonnes/day

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases
Prevent discharge of undissolved substance to or recover from onsite wastewater.

Conditions and measures related to treatment of waste (including article waste)

Waste treatment
Dispose of solid residue according to applicable regulations.

1.2. CS2: Worker Contributing Scenario: Rolling, Brushing - Roller, spreader, flow application - Manual (PROC10, PROC11, PROC19)

Process Categories	Roller application or brushing - Non industrial spraying - Manual activities involving hand contact (PROC10, PROC11, PROC19)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use/exposure

Amounts used:

Annual site tonnage <= 0.5 t(onnes)/year
Daily amount per site <= 1.37 kg/day

Duration:

Covers daily exposures up to 8 hours

Frequency:

Covers use up to <= 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures

Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

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

Personal protection

Wear suitable gloves tested to EN374.
Wear suitable coveralls to prevent exposure to the skin.

1.3 Exposure estimation and reference to its source

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

Release route	Release rate	Release estimation method
Air	0.17 kg/day	N/A
Water	0.011 kg/day	N/A

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
Trimethoxyvinilsilane

Exposure Scenario, 08/06/2021

Substance identity	
	Trimethoxyvinilsilane
CAS No.	2768-02-7
INDEX No.	014-049-00-0
EINECS No.	220-449-8
Registration number	01-2119513215-52

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1. **ES 1**

1. ES 1

1.1 TITLE SECTION

Exposure Scenario name	Use in rigid foams, coatings, adhesives and sealants - Barrier (Sealant)
Date - Version	18/05/2021 - 1.0
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22) - Building and construction work (SU19)
Product Categories	Adhesives, sealants (PC1)

Environment Contributing Scenario

CS1 Low environmental release	ERC8c - ERC8f

Worker Contributing Scenario

CS2 Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application	PROC0
CS3 Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application	PROC1

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario: Low environmental release (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

Concentration of substance in product:
Concentration after dilution for use maximum [%]: 0.7 %

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

Amounts used:
Daily amount per site = 0.28 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

	Water - minimum efficiency of: 1.5 %

Conditions and measures related to sewage treatment plant

STP type:
Onsite Sewage Treatment Plant
Water - minimum efficiency of: = 0.013 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment
Dispose of waste product or used containers according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 20000 m³/day

Covers indoor and outdoor use

1.2. CS2: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC0)

Process Categories	Other (PROC0)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers concentrations up to 0.7 %

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration <= 6 h

Frequency:
Use frequency = 250 days per year

Technical and organisational conditions and measures

Technical and organisational measures
Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
For further specification, refer to section 8 of the SDS.

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use
Room size: Covers use in room size of = 20 m³
Temperature: Covers use at ambient temperatures. 25°C

1.2. CS3: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC1)

Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers concentrations up to 2 %

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration = 8 h

Frequency:
Use frequency = 1 days per year

Duration:
Covers use up to = 6 h

Frequency:
Use frequency = 1 days per year

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use
Room size: Covers use in room size of = 20 m³
Ventilation rate: = 0.6 ach (air changes per hour)

1.3 Exposure estimation and reference to its source

1.3. CS2: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC0)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 1.9 mg/m³	N/A	= 0.069
dermal, long-term	= 4.53 mg/kg bw/day	ConsExpo	= 0.038
combined routes, long-term	N/A	N/A	0.107

1.3. CS3: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 4.57 mg/m³	N/A	= 0.682
dermal, long-term	= 0.044 mg/kg bw/day	ConsExpo	< 0.01
combined routes, short-term	N/A	N/A	0.682

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.