

Safety Data Sheet

According to REACH Regulation No. 1907/2006/EC as amended by Regulation 2015/830/EC

Identification of the substance/mixture and of the company/undertaking**Product identifier**

Trade name: R-KEX-II

Relevant identified uses of product

Chemical anchoring system for building industry

Details of the supplier of the safety data sheet

Company name and address:	Rawlplug S.A. ul. Kwidzynska 6 51-416 Wroclaw Poland
Telephone number	+48 (0) 71 32 60 100
E-mail address of competent person responsible for the SDS	infochem@rawlplug.com

General information**Storage**

Storage temperature: 5-25 °C. Protect the product against solar radiation. Store the product in a well-ventilated place.

Comment

A separate safety data sheet has been prepared for each component. Do not separate any SDS from the title page.

Additional information

The 2-component cartridge contains:

- Component A (R-KEX-II, A): epoxy resin, inorganic powdery extenders, liquid rheological additives;
- Component B (R-KEX-II, B): amine hardener, inorganic powdery extenders.

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**Trade name: R-KEX-II, A
Product form: mixture
UFI code: GG10-JOND-J00Q-2PJ6**1.2. Relevant identified uses of substance or mixture and uses advised against**

Epoxy resin systems

1.3. Details of the supplier of the safety data sheet

Company name and address:	Rawlplug S.A. ul. Kwidzynska 6 51-416 Wroclaw Poland
Telephone number	+48 (0) 71 32 60 100
E-mail address of competent person responsible for the SDS	infochem@rawlplug.com

1.4. Emergency telephone number : + 48 661 970 365

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Commission Regulation (EC) No. 1272/2008:

Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Irrit. 2	H315	Causes skin irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT RE 1	H372	Causes damage to organs (lungs) through prolonged or repeated exposure.

2.2. Label elements

GHS Pictograms:



Signal word: **Danger**

Hazard statements:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
H372	Causes damage to organs (lungs) through prolonged or repeated exposure.

Precautionary statements:

Prevention:	P280	Wear protective gloves, protective clothing, eye protection, face protection.
	P273	Avoid release to the environment.
	P264	Wash (hands) thoroughly after handling.
	P260	Do not breathe dust.
Response:	P305+P351+P338	F IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P391	Collect spillage.
	P314	Get medical advice/attention if you feel unwell.
Storage:	-	
Disposal:	P501	Dispose of contents/container to local/regional/national/international regulations.

Dangerous substances:

reaction product of bisphenol A with epichlorohydrin
 1,6-bis (2,3-epoxypropoxy) hexane
 reaction products of bisphenol F with epichlorohydrin
 quartz

2.3. Other hazards This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Section 3: Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Product identifiers	Ingredient name	Content	Classification
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		(% wt.)	(EC) 1272/2008 [CLP]
CAS: 25068-38-6 Reg. nr.: 01-2119456619-26 EC: 500-033-5	Reaction product of bisphenol A with epichlorohydrin	32-45	Skin Sens. 1, H317 Skin Irrit. 2, H315 (C >=5%) Eye Irrit. 2, H319 (C >=5%) Aquatic Chronic 2, H411
CAS: 9003-36-5 Reg. nr.: 01-2119454392-40 EC: 500-006-8	Reaction products of bisphenol F with epichlorohydrin	16 – 23	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
CAS: 14808-60-7 Reg. nr.: released in acc. with annex V.7 EC: 238-878-4	Quartz	< 21	STOT RE 1, H372 (C >=10%)
CAS: 16096-31-4 Reg. nr.: 01-2119463471-41-0000 EC: 240-260-4	1,6-bis(2,3-epoxypropoxy)hexane	6,5 – 13,0	Skin. Sens. 1, H317 Skin. Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412

Additional information: For the wording of the listed phrases refer to section 16.

Section 4: First aid measures

4.1. Description of first aid measures

- General notes: Remove/Take off immediately all contaminated clothing.
- Following inhalation: Move the exposed individual to the fresh air and keep at rest in a position comfortable for breathing. If not breathing, breathing is irregular or respiratory arrest occurs, artificial respiration should be provided or oxygen should be given by qualified personnel. If unconscious, place in recovery position and get medical attention immediately. Contact toxicology center.
- Following skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. In case irritation or any complaints occur, get medical attention and avoid further exposure.
- Following eye contact: Immediately flush eyes with plenty of water. Check for and remove any contact lenses. Get medical attention.
- Following ingestion: Wash out mouth with water. Move the exposed individual to the fresh air and keep at rest in position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low, so that the vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing (e.g. tie, belt). Get medical attention.

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

Product can cause irritation to eyes, skin and respiratory system. It can also lead to skin sensitization. After exposure, symptoms can be delayed. Contact with eyes can result in eye erythema and excessive lacrimation. Exposure of inhalation routes can cause coughing. Prolonged exposure of skin can cause erythema. Lack of data on symptoms occurring after ingestion.

4.3. Indication of any immediate medical attention and special treatment needed

In case of inhalation of decomposition products, symptoms may be delayed. Exposed individual may need to be kept under medical surveillance for 48 hours.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing

media: Use dry chemical (ABC powder) or CO₂, optionally spray mist water.

Unsuitable

extinguishing media: Unknown

5.2. Special hazards arising from the substance or mixture

In case of exposition on an open flame, a pressure rises and a packaging may explode. Moreover, hazardous decomposition products can arise: e.g. carbon oxides, unidentified hydrocarbons.

5.3. Advice for firefighters

Use full protective clothing compliant with EN 469 standard. Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action involving any health risk shall be taken through contact with product. Avoid contact with product without personal protective equipment, in case of contact with product when ventilation is insufficient. Avoid breathing vapors.

For emergency responders:

Disposal of large quantities of the product should be carried out with personal protective equipment as described in section 8.

6.2. Environmental precautions

Avoid dispersal of spilled material and its contact with soil, sewers, surface and ground water. Inform the relevant authorities if the product has caused environmental pollution.

6.3. Methods and material for containment and cleaning up

For small spills, dissolve in water and collect. Otherwise, absorb with an inert material and place in an appropriate waste container. If large spillage has occurred, remove containers from the spill area. Secure drains, water installations and cellar and closed areas entrances. Collect the spilled product with non-flammable substances, e.g. sand, diatomaceous earth or vermiculite. Place in an appropriate waste container, dispose of in accordance with applicable regulations.

6.4. Reference to other sections

See section 8 for information on appropriate personal protective equipment.

See section 13 for additional waste treatment information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Put on an appropriate personal protective equipment (see section 8). People with a tendency to skin allergies should avoid contact with the component. Do not allow product to contact eyes or skin. Use the component with appropriate ventilation. No smoking in the workplace. Use face and respiratory protection when ventilation is inadequate. Follow the manufacturer's instructions for use of product. Keep product in the original container. Do not use product after the expiration date.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container, keep tightly closed when not in use. Protect from direct sunlight and other heat sources in dry, well-ventilated area, away from incompatible materials, food and drink. Store at 5–25 °C. To ensure product stability avoid temperature fluctuation during storage (overheating and undercooling).

7.3. Specific end use(s)

See Section 1

Section 8: Exposure controls/personal protection

8.1. Control parameters

Ingredient name and CAS number		Maximum acceptable concentration	
		mg/m ³	fibers in cm ³
Crystalline Silia Dust 14808-60-7	inhalable fraction	2	-
	respirable fraction	0,3	-

The Regulation of the Minister of Labour and Social Policy of June 12th, 2018 on maximal authorized concentrations and intensity of factors harmful to health in work environment (Dz.U. 2018 poz. 1286).

The Regulation of the Minister of Health of 2 February 2011. On tests and measurements of health hazard factors in the work environment (Dz. U. No. 33, item 166 2011).

The Regulation of the Minister of Health of 30 December 2004. On occupational health and safety related to occurrence of chemical agents at work (Dz. U. No. 33, pos. 86, 2005).

Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

Commission Directive 2000/39/EC of 8 June 2000 Commission Directive 2000/39/EC of June establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC).

DN(M)ELs

Ingredient name and CAS number	Route of exposure	Value	Group	Effect	
Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	Dermal	8,3 mg/kg	Workers	Systematic, short-term	
		8,3 mg/kg	Workers	Systematic, long-term	
	Inhalation	3,6 mg/kg	Consumers	Systematic, short-term	
		3,6 mg/kg	Consumers	Systematic, long-term	
		12,3 mg/m ³	Workers	Systematic, short-term	
		12,3 mg/m ³	Workers	Systematic, long-term	
		0,75 mg/m ³	Consumers	Systematic, short-term	
		0,75 mg/m ³	Consumers	Systematic, long-term	
		0,75 mg/kg	Consumers	Systematic, long-term	
		0,75 mg/kg	Consumers	Systematic, long-term	
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	Inhalation	29,39 mg/m ³	Workers	Systematic, long-term	
	Dermal	8,7 mg/m ³	Consumers	Systematic, long-term	
		104 mg/kg	Workers	Systematic, long-term	
	Oral	8,3 µg/cm ²	Workers	Local, short-term	
		62,5mg/kg	Consumers	Systematic, short-term	
		6,25 mg/kg	Consumers	Systematic, long-term	
		6,25 mg/kg	Consumers	Systematic, long-term	
1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	Inhalation	4,9 mg/m ³	Workers	Systematic, long-term	
		0,44 mg/m ³	Workers	Miejscowy, długotrwałe	
		2,9 mg/m ³	Consumers	Systematic, short-term	
		2,9 mg/m ³	Consumers	Systematic, long-term	
	Dermal	0,27 mg/m ³	Consumers	Local, long-term	
		22,6 µg/cm ²	Workers	Local, long-term	
		13,6 µg/cm ²	Consumers	Local, long-term	
		13,6 µg/cm ²	Consumers	Local, long-term	
		Oral	0,83 mg/kg	Consumers	Systematic, short-term
			0,83 mg/kg	Consumers	Systematic, long-term

PNECs

	Environmental protection target	Value
Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	Fresh water	0,006 mg/l
	Marine water	0,0006 mg/l
	Intermittent releases	0,018 mg/l
	Freshwater sediments	0,996 mg/kg
	Marine water sediments	0,0996 mg/kg
	STP	10 mg/l
	Soil	0,196 mg/kg
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	Fresh water	0,003 mg/l
	Marine water	0,0003 mg/l
	Intermittent releases	0,0254 mg/l
	Freshwater sediments	0,294 mg/kg
	Marine water sediments	0,0294 mg/kg
	STP	10 mg/l
	Soil	0,237 mg/kg
1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	Fresh water	0,0115 mg/l
	Marine water	1,15 µg/l
	Freshwater sediments	0,283 mg/kg
	Marine water sediments	0,283 mg/kg
	Intermittent releases	0,115 mg/l

8.2. Exposure controls

Appropriate technical protection:

Ensure sufficient ventilation in working place. In case of insufficient ventilation use appropriate technical protection measures (e.g. local fume hood) which will allow to maintain the exposure level below the recommended limits, or use a protective mask with a filter.

Individual protective measures:

General recommendation:

Obey hygiene rules: do not eat, drink, or smoke at workplace. Wash your hands with soap and water after you finish working with product. Avoid eye and skin contamination. Ensure effective ventilation at the workplace.

Eye/face protection:

Use safety glasses with side shields.

Hand protection:

Use chemical resistant gloves standard when working with the product. It is advised to use butyl or nitrile rubber gloves.

Skin and body protection:

Use protective clothes.

Respiratory protection:

At concentrations causing irritation use mask with filter type: A – against organic gases and vapors.

Remarks:

Advice on personal protection is applied for high exposure levels. Appropriate personal protective equipment should be picked according to the risk comes from the product usage. Personal protective equipment must meet requirements of directive 89/686/CE.

Environmental exposure controls:

Environmental monitoring		Phenol
Reference values of the substance in the air, averaged over the period:	1 hour	20 µg/m ³
	1 year	2,5 µg/m ³

Legal basis: Regulation of the Minister of the Environment of January 26, 2010 on the reference value for some substances in the air (Journal of Laws 2010 No. 16 item 87).

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	solids in paste form
Colour:	dark grey
Smell:	Sweet
Odor threshold:	Not determined
pH:	5
Melting point / freezing point:	not applicable
Initial boiling point and boiling range:	not determined
Flash point:	not applicable
Evaporation rate:	Not determined
Flammability (solid, gas):	Inflammable
Upper/lower flammability or explosive limits:	Not determined
Vapour pressure:	Not determined
Relative density:	1,39 ± 0,1 g/cm ³ (PN-EN 542:2005)
Solubility:	Insoluble in water, partly soluble in acetone and isopropyl alcohol
Partition coefficient n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Dynamic viscosity (23 ⁰ C; 100 [s ⁻¹]):	7,6 ± 1 [Pa·s] (EN ISO 3219)
Explosive properties:	Not determined
Oxidizing properties:	Not applicable

9.2. Other information No additional data

Section 10: Stability and reactivity

10.1. Reactivity

No specific data available

10.2. Chemical stability

Product is stable under normal storage conditions (temp. 5 - 25⁰C). In the case of visible changes in the consistency of the product, the presence of significant amounts of air in components it is recommended to cessation work with the product.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored under normal conditions of use.

10.4. Conditions to avoid

To avoid thermal degradation of product do not allow to overheat it over the temperature of recommended storage. Protect from sunlight. Overheating of B component over SADT temperature (Self Accelerating Decomposition Temperature, see section 9.1) can cause spontaneous decomposition of the substances in the packaging during transport.

10.5. Incompatible materials

No specific data

10.6. Hazardous decomposition products

Unidentified hydrocarbons, carbon and nitrogen oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity The experimental information related to the toxicological properties of the product itself is not available.

Substance name and CAS number	Route of exposure	Species	Result
Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	LD ₅₀ (oral)	rat	>2000 mg/kg
	LD ₅₀ (dermal)	rabbit	>2000 mg/kg
	LD ₅₀ (oral)	rat	2000 mg/kg
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	LD ₅₀ (oral)	rat	>2000 mg/kg
	LD ₅₀ (dermal)	rabbit	>2000 mg/kg
1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	LD ₅₀ (oral)	rat	2.900 mg/kg
	LD ₅₀ (dermal)	rat	> 2000 mg/kg

Irritation / Corrosivity Based on available data, product causes severe skin burns and eye damage.

Sensitization Based on available data, the product can be considered a moderate skin sensitizer, and may have delayed hypersensitivity.

Mutagenicity Based on available data, product is suspected of causing genetic defects.

Carcinogenicity Based on available data, classification criteria are not met by the product.

Reproductive toxicity Product is suspected of damaging fertility and the unborn child.

Single dose toxicity Based on available data, classification criteria are not met by the product.

Repeated dose toxicity Based on available data, product causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Aspiration hazard Based on available data, product does not meet classification criteria.

Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation: Vapors released during curing process may cause respiratory tract irritation, coughing, nausea and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin exposure: Irritation and redness. May cause sensitization by skin contact. Skin reaction may be delayed in time.

Eye exposure: Pain, lacrimation, irritation and redness

Ingestion: No specific data

Section 12: Ecological information

12.1. Toxicity

Substance name and CAS number	Dose / time of exposure / method	Species	Results
Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	LC ₅₀ /96h	Oncorhynchus mykiss (fish)	1,2 mg/l
	EC ₅₀ /48h / OECD 202	Daphnia magna	2,8 mg/l
	EC ₅₀ (biomass)/72h	Scenedesmus capricornutum (algae)	9,4 mg/l
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	LC ₅₀ /96h/ OECD 203	Oncorhynchus mykiss (fish)	>1000 mg/l
	EL ₅₀ /48h / OECD 202	Daphnia magna	>1000 mg/l
	EC ₅₀ /72h / OECD 201	Pseudokirchnerella subcapitata (algae)	>1,8 mg/l

1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	LC ₅₀ /96h/ OECD 203 EC ₅₀ / 48h OECD 202 LC ₅₀ /2d	Daphnia magna Scenedesmus capricornutum Pseudokirchnerella subcapitata (algae)	30 mg/l 47 mg/l 23,1 mg/l
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12.2. Persistence and degradability

Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	Degr. 16% after 28 days. Hardly biodegradable (OECD 301B, 301D)
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	Degr. 82% after 28 days. Readily biodegradable (OECD 301 F)

12.3. Bioaccumulative potential

Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	BCF = 31
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	BCF = 150 L/kg
1,6-bis(2,3-epoxypropoxy)hexane 16096-31-4	BCF = 3,57

12.4. Mobility in soil

Reaction product of bisphenol A with epichlorohydrin, epoxy resin 25068-38-6	logK _{oc} = 2,65 (calc.)
Reaction products of bisphenol F with epichlorohydrin, epoxy resin 9003-36-5	logK _{oc} = 3,65 (OECD 121)

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

No reports on other adverse effects

Section 13: Disposal considerations

13.1. Waste treatment methods

- Product:** Minimum waste quantities. Must not be disposed together with household garbage. Do not allow product to reach sewage system, ground water and water course. Unused product dispose of as a chemical waste in licensed facility, in accordance with local regulations of environmental protection and binding legislation on recycling. It is recommended to incinerate wastes arose during product usage in a proper incineration oven. Small quantities of both components may be reacted together, allowed to cure and dispose of as a solid waste.
- Packaging:** Used product packaging (cartridge) may be delivered to plastic waste recycling plant. Contaminated package must be disposed like wastes arose during product usage.
- European Waste Code:** 08 04 09 – waste adhesives and sealants containing organic solvents or other dangerous substances;
07 02 13 – waste plastic;
16 03 05 – organic wastes containing hazardous substances;
15 02 02 – absorbents, filter materials (including oil filters not otherwise specified);

wiping cloths, protective clothing contaminated by hazardous substances;
15 01 10 – packaging containing residues of or contaminated by hazardous substances.

Law of December 14th, 2012 on waste (Journal of Laws No. 0, item 21, 2012 as amended);

Law of June 13th, 201 on packaging and packaging waste (Journal of Laws No. 0, item 888, 2013); Regulation of the Minister of Environment dated September 29th, 2014 on waste catalogue (Journal of Laws No. 0, item 1923, 2014).

Section 14: Transport information



14.1 UN number

ADR/RID/IATA/IMDG: UN 3077

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID N.O.S. [Reaction product: bisphenol-A-(epichlorhydrin);
reaction product: bisphenol-F-epichlorhydrin]

14.3 Transport hazard class (es)

90

14.4 Packing group

III

14.5 Environmental hazards

Environmentally hazardous substance

14.6 Special precautions for user

Remark article 375: Commodities transported in single or folded packaging, including net quantity for single packaging or interior packaging of liquid of 5l or less, or of net weight 5kg or less, don't underlie any of ADR rules, under condition that the packaging comply with general rules 4.1.1.1, 4.1.1.2 i 4.1.1.4 do 4.1.1.8.

Required sign for environmentally hazardous materials (ADR 2.2.9.1.10, IMDG 2.10.3) for single and combined packaging, inner packagings containing more than 5 liters of liquids, or more than 5 kg of solid

Tunnel restriction code: E

Transport category: III – limited 1000 kg

Limited amounts: 5 Kg

Packing instructions: ADR: 'P002 IBC08 LP02 R001

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

Inapplicable

Section 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No 1907/2006 (text with EEA relevance).

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC of 20 December 1994 on packaging and packaging waste.

COMMISSION REGULATION (EU) 2018/669 of 16 April 2018 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

REGULATION (EU) No 528/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 May 2012 concerning the making available on the market and use of biocidal products.

15.2. Chemical safety assessment

Not applicable

Section 16: Other information

Full text of H-statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H372	Causes damage to organs (lungs) through prolonged or repeated exposure.

Hazard class:

Eye Irrit. 2	Eye irritation category 2.
Skin Irrit 2	Skin Irritation, category 2.
Skin Sens 1	Skin Sensitisation, category 2
STOT RE 1	Specific target organ toxicity – Repetitive exposure – category 1
Aquatic Chronic 3	Aquatic Chronic, category 3.

Acronyms and abbreviations

DNEL	Derived no-effect level
PNEC	Predicted No Effect Concentration
PBT	Persistent, bioaccumulative and toxicity substances
SvHc	Substances of Very High Concern
STOT	Repeated, Single Exposure
RE, SE	Specific Target Organ Toxicity
STOT	Registration, Evaluation, Authorisation and Restriction of Chemicals
REACH	Regulation No 1907/2006
	Predicted (No) Effect Concentration
P(N)EC	Median Lethal Dose
LD ₅₀	Lethal concentration, 50%
LC ₅₀	European Union
EU	European Standard
EN	Chemical Abstracts Service number

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

Classification according to Regulation (EC) No 1272/2008	Classification procedure
Skin Sens. 1	Calculation method
Skin Corr. 2	Calculation method
Eye Dam. 2	Calculation method
Aquatic Chronic 2	Calculation method
STOT RE 1	Calculation method

Alterations compared to the previous version 1, 9

Training advice: People using the product professionally, should be trained in handling the product, safety and hygiene. Drivers should be trained and obtain the appropriate certificate in accordance with the ADR requirements.

The information contained in the Safety Data Sheet is based on current state of knowledge and applies to product with its identified use. The information is intended to aid the user in controlling the handling risks and not to guarantee product quality. If conditions of product use are not under manufacturer control, responsibility for safe use falls to the user. Employer is obliged to inform all employees working with the product, about possible hazards and personal protection specified in Safety Data Sheet.

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

1.1. Product identifier

Trade name: R-KEX-II, B
 Product form: mixture
 UFI code: MD10-10Y0-8007-EAY4

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

Epoxy hardener

1.3. Details of the supplier of the safety data sheet

Company name and address: Rawlplug S.A.
 ul. Kwidzyńska 6
 51-416 Wrocław
 Poland
 Telephone number +48 (0) 71 32 60 100
 E-mail address of competent person responsible for the SDS infochem@rawlplug.com

1.4. Emergency telephone number : + 48 661 970 365

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Commission Regulation (EC) No. 1272/2008:

Acute Tox.4	H302	Harmful if swallowed.
Acute Tox.4	H312	Harmful in contact with skin.
Eye Dam.1	H318	Causes serious eye damage.
Aquatic Chronic 3	H411	Toxic to aquatic life with long lasting effects.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Skin Corr. 1B	H314	Causes severe skin burns and eye damage.
Repr. 2	H361	Suspected of damaging fertility or the unborn child.
STOT RE 1	H372	Causes damage to organs (lungs) through prolonged or repeated exposure.

2.2. Label elements

GHS Pictograms:



Signal word:

Danger

Hazard statements:

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long-lasting effects.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
H312	Harmful in contact with skin.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs (lungs) through prolonged or repeated exposure.

Precautionary statements:

Prevention:	P280	Wear protective gloves, protective clothing, eye protection, face protection.
	P264	Wash (hands) thoroughly after handling.
	P260	Do not breathe dust.
	P273	Avoid release to the environment.
	P201	Obtain special instructions before use.
Response:	P310	Immediately call a POISON CENTER or doctor.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P302+P352 P391	IF ON SKIN: Wash with plenty of soap and water. Collect spillage.
Storage:	P405	Store locked up.
Disposal:	P501	Dispose of contents/container to local/regional/national/international regulations.

Dangerous substances:

1-2(-aminoethylo)piperazine
 1,3-Cyklohexanodimethyloamine
 2,4,6-Tris(dimethylaminomethyl)phenol
 Amines, polyetylenepoly-, triethylenetetramine fraction

2.3. Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Section 3: : Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Product identifiers	Ingredient name	Content (% wt.)	Classification
			(EC) 1272/2008 [CLP]
CAS: 14808-60-7 Reg. nr.: released in acc. with annex V.7	Quartz	< 18,0	STOT RE 1, H372 (C >=10%)

EC: 238-878-4			
CAS: 90640-67-8 Reg. nr.: 01-2119487919-13-xxxx EC: 292-588-2	Amines, polyetylenepoly-, triethylenetetramine fraction	<26,4	Skin Corr. 1B, H314 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Sens. 1, H317 Aquatic Chronic 3, H412
CAS: 2579-20-6 Reg. nr.: 01-2119543741-41-xxxx EC: 219-941-5	1,3- Cyklohexanodimethyloamine	<13,2	Skin Corr. 1C, H314 Acute Tox. 4, H302 Acute Tox. 4, H312 Aquatic Chronic 3, H412
CAS: 140-31-8 Reg. nr.: 01-2119471486-30-xxxx EC: 205-411-0	1-2(-aminoethylo)piperazine	<16,6	Acute Tox. 3, H311 Repr. 2, H361 STOT RE 1, H372 Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Chronic 3, H412
CAS: 90-72-2 Reg. nr.: 01-2119560597-27-xxxx EC: 202-013-9	2,4,6- Tris(dimethylaminomethyl)ph enol	<13,2	Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317
CAS: 69-72-7 Reg. nr.: 01-2119486984-17-xxxx EC: 200-712-3	Salicylic acid	<5,2	Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361

Additional information: For the wording of the listed phrases refer to section 16.

Section 4: First aid measures

4.1. Description of first aid measures

- General notes: Remove/Take off immediately all contaminated clothing.
- Following inhalation: Move the exposed individual to the fresh air and keep at rest in a position comfortable for breathing. If not breathing, breathing is irregular or respiratory arrest occurs, artificial respiration should be provided or oxygen should be given by qualified personnel. If unconscious, place in recovery position and get medical attention immediately. Contact toxicology center.
- Following skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. In case irritation or any complaints occur, get medical attention and avoid further exposure.
- Following eye contact: Immediately flush eyes with plenty of water. Check for and remove any contact lenses. Get medical attention. Continue flushing eyes during transport to hospital.
- Following ingestion: Wash out mouth with water. Move the exposed individual to the fresh air and keep at rest in position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low, so that the vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing (e.g. tie, belt). Get medical attention.

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

Product can cause irritation to eyes, skin and respiratory system. It can also lead to skin sensitization. After exposure, symptoms can be delayed. Contact with eyes can result in eye erythema and excessive lacrimation. Exposure of inhalation routes can cause coughing. Prolonged exposure of skin can cause erythema. Lack of data on symptoms occurring after ingestion.

4.3. Indication of any immediate medical attention and special treatment needed

In case of inhalation of decomposition products, symptoms may be delayed. Exposed individual may need to be kept under medical surveillance for 48 hours.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Use dry chemical (ABC powder) or CO₂, optionally spray mist water.

Unsuitable extinguishing media:

Unknown

5.2. Special hazards arising from the substance or mixture

In case of exposition on an open flame, a pressure rises and a packaging may explode. Moreover, hazardous decomposition products can arise: e.g. carbon oxides, unidentified hydrocarbons.

5.3. Advice for firefighters

Use full protective clothing compliant with EN 469 standard. Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode. Containers exposed to fire cool with water.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action involving any health risk shall be taken through contact with product. Avoid contact with product without personal protective equipment, in case of contact with product when ventilation is insufficient. Avoid breathing vapors.

For emergency responders:

Disposal of product spillage should be taken only if personal protective equipment described in section 8 is available.

6.2. Environmental precautions

Avoid dispersal of spilled material and its contact with soil, sewers, surface and ground water. Inform the relevant authorities if the product has caused environmental pollution.

6.3. Methods and material for containment and cleaning up

For small spills, dissolve in water and collect. Otherwise, absorb with an inert material and place in an appropriate waste container. If large spillage has occurred, remove containers from the spill area. Secure drains, water installations and cellar and closed areas entrances. Collect the spilled product with non-flammable substances, e.g. sand, diatomaceous earth or vermiculite. Place in an appropriate waste container, dispose of in accordance with applicable regulations.

6.4. Reference to other sections

See section 8 for information on appropriate personal protective equipment.
See section 13 for additional waste treatment information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Put on an appropriate personal protective equipment (see section 8). People with a tendency to skin allergies should avoid contact with the component. Do not allow product to contact eyes or skin. Use the component with appropriate ventilation. No smoking in the workplace. Use face and respiratory protection when ventilation is inadequate. Follow the manufacturer's instructions for use of product. Keep product in the original container. Do not use product after the expiration date.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container, keep tightly closed when not in use. Protect from direct sunlight and other heat sources in dry, well-ventilated area, away from incompatible materials, food and drink. Store at 5–25 °C. To ensure product stability avoid temperature fluctuation during storage (overheating and undercooling).

7.3. Specific end use(s) See Section 1

Section 8: Exposure controls/personal protection

8.1. Control parameters

Substance name and CAS number	NDS	NDSch	NDSP
Ethylbenzene 100-41-4	200 mg/m ³	400 mg/m ³	-
2-methylpropan-1-ol 78-83-1	100 mg/m ³	200 mg/m ³	-
2-methoxy-1-methylethyl acetate 108-65-6	260 mg/m ³	520 mg/m ³	-

Substance name and CAS number	NDS	NDS
Quartz with modified surface CAS: 14808-60-7	mg/m ³	włókien w cm ³
a) Inhalable fraction	2	-
b) Respirable fraction	0,3	-

The Regulation of the Minister of Labour and Social Policy of June 12th, 2018 on maximal authorized concentrations and intensity of factors harmful to health in work environment (Dz.U. 2018 poz. 1286).

The Regulation of the Minister of Health of 2 February 2011. On tests and measurements of health hazard factors in the work environment (Dz. U. No. 33, item 166 2011).

The Regulation of the Minister of Health of 30 December 2004. On occupational health and safety related to occurrence of chemical agents at work (Dz. U. No. 33, pos. 86, 2005).

Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

Commission Directive 2000/39/EC of 8 June 2000 Commission Directive 2000/39/EC of June establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC).

DN(M)EL

Substance name and CAS number	Route of exposure	Value	Group
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Dermal Inhalation	0,57mg/kg/bw/d 1 mg/m ³	Workers
1-2(-aminoethylo)piperazine 140-31-8	Inhalation	10,6mg/m ³	Workers
2,4,6-Tris(dimethylaminomethyl)phenol 90-72-2	Inhalation	0,31 mg/m ³	Workers
Salicylic acid 69-72-7	Dermal	2mg/kg /bw/d	Workers

PNECs

Substance name and CAS number	Environmental protection target	Result
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Fresh water Marine water	0,19 mg/l 0,038 mg/l
1-2(-aminoethylo)piperazine 140-31-8	Fresh water Marine water	0,058 mg/l 0,0058 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol 90-72-2	Fresh water	0,84 mg/l
Salicylic acid 69-72-7	Fresh water Marine water	0,2 mg/l 0,02 mg/l

8.2. Exposure controls

Appropriate technical protection: Ensure sufficient ventilation in working place. In case of insufficient ventilation use appropriate technical protection measures (e.g. local fume hood) which will allow to maintain the exposure level below the recommended limits, or use a protective mask with a filter.

Individual protective measures:

General recommendation: Obey hygiene rules: do not eat, drink, or smoke at workplace. Wash your hands with soap and water after you finish working with product. Avoid eye and skin contamination. Ensure effective ventilation at the workplace.

Eye/face protection: Use safety glasses with side shields.

Hand protection: It is recommended to use chemical protective gloves or medical gloves intended to protect the user against chemical hazards (category III), in accordance with the standard, e.g. EN 374. It is recommended to use gloves made of butyl, polychloroprene and nitrile, viton. The consumer should respect recommendations given by gloves manufacture, regard to time of braking through and permeating. Gloves used as protection against chemical should fulfill the requirements equal to second level of effectiveness when it comes to the usage of three chemicals substances listed in PN-EN 374-1:2005 norm. Due to sweating of hands and minimalization of moisture in the gloves, it is necessary to be changed the during one shift. Hermitization of the gloves should be checked before usage.

Skin and body protection: Use protective clothes.

Respiratory protection: Use mask a type A at concentration that causes irritation. Before starting your work, determine minimum value of protection factor due to making a choice of necessary class and type of respiratory protection equipment.

Remarks: Advice on personal protection is applied for high exposure levels. Appropriate personal protective equipment should be picked according to the risk comes from the product usage. Personal protective equipment must meet requirements of directive 89/686/CE.

Environmental exposure controls:

Substance name and CAS number	Reference values of the substance in the air, averaged over the period:	
	1 hour	1 year
Phenol 61788-44-1	20 µg/m ³	2,5 µg/m ³
Xylene	100 µg/m ³	10 µg/m ³

1330-20-7		
2-methylpropan-1-ol 78-83-1	300 µg/m ³	26 µg/m ³
Ethylbenzene 100-41-4	500 µg/m ³	38 µg/m ³

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Solids on paste form
Colour:	red
Smell:	amic
Odor threshold:	not determined
pH:	6
Melting point / freezing point:	not applicable
Initial boiling point and boiling range:	>200°C
Flash point:	not applicable
Evaporation rate:	not determined
Flammability (solid, gas):	inflammability
Upper/lower flammability or explosive limits:	not determined
Vapour pressure:	not determined
Relative density:	1,33 ± 0,1 g/cm ³ (PN-EN 542)
Solubility:	insoluble in water, partly soluble in acetone and isopropyl alcohol
Partition coefficient n-octanol/water:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
Dynamic viscosity (23°C; 100 [s ⁻¹]):	16 ± 2 [Pa·s] (EN ISO 3219)
Explosive properties:	not determined
Oxidizing properties:	not applicable

9.2. Other information No additional data

Section 10: Stability and reactivity

10.1. Reactivity

No specific data available

10.2. Chemical stability

Product is stable under normal storage conditions (temp. 5 - 25°C). In the case of visible changes in the consistency of the product, the presence of significant amounts of air in components it is recommended to cessation work with the product. Protect against sunlight

10.3. Possibility of hazardous reactions

No hazardous reaction when it is handled and stored under normal conditions of use.

10.4. Conditions to avoid

Due to avoiding of thermal degradation of product do not allow to overheat it over the temperature of recommended storage. Protect from sunlight. Overheating of B component over SADT temperature (Self Accelerating Decomposition Temperature, see section 9.1) can cause spontaneous decomposition of the substances in the packaging during transport.

10.5. Incompatible materials

No specific data

10.6. Hazardous decomposition products

Unidentified hydrocarbons, carbon and nitrogen oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity Based on the available data for the ingredients in the mixture, the product is harmful if swallowed and harmful in contact with skin.

Substance name and CAS number	Dose / time of exposure / method	Species	Results
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	LD ₅₀ (oral)	rat	1716 mg/kg
	LD ₅₀ (dermal)	rabbit	1465 mg/kg
1,3-Cyklohexanodimethyloamine 2579-20-6	LD ₅₀ (oral)	rat	700 mg/kg
	LD ₅₀ (dermal)	rabbit	1700 mg/kg
1-2(-aminoethylo)piperazine 140-31-8	LD ₅₀ (oral)	rabbit	2097 mg/kg
	LD ₅₀ (oral)	rat	2140 mg/kg
	LD ₅₀ (dermal)	rabbit	866 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol 90-72-2	LD ₅₀ (oral)	rat	2169 mg/kg
Salicylic acid 69-72-7	LD ₅₀ (oral)	rat	891 mg/kg
	LD ₅₀ (dermal)	rat	>2000 mg/kg
Phenol 61788-44-1	LD ₅₀ (oral)	rat	>2000 mg/kg
	LD ₅₀ (dermal)	rat	>2000 mg/kg

Irritation / Corrosivity Based on available data, product causes severe skin burns and eye damage.

Sensitization Based on available data, the product can be considered a moderate skin sensitizer, and may have delayed hypersensitivity.

Mutagenicity Based on available data, classification criteria are not met by the product..

Carcinogenicity Based on available data, classification criteria are not met by the product.

Reproductive toxicity Product is suspected of damaging fertility and the unborn child.

Single dose toxicity Based on available data, classification criteria are not met by the product.

Repeated dose toxicity Based on available data, product causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

Aspiration hazard Based on available data, product does not meet classification criteria.

Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation: Vapors released during curing process may cause respiratory tract irritation, coughing, nausea and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin exposure: Irritation and redness. May cause sensitization by skin contact. Skin reaction may be delayed in time.

Eye exposure: Pain, lacrimation, irritation and redness

Ingestion: No specific data

Section 12: Ecological information

12.1. Toxicity

Substance name and CAS number	Dose / time of exposure / method	Species	Results
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	EC ₅₀ / 48h EC ₅₀ / 48h EC ₅₀ /72h	Daphnia magna Scenedesmus capricornutum (algae) Pseudokirchnerella subcapitata (algae)	31,1 mg/l 3,7 mg/l 20 mg/l
1,3-Cyklohexanodimethyloamine 2579-20-6	EC ₅₀ LC ₅₀	Pseudomus putida Leuciscus idus	90 mg/l 130 mg/l
1-2(-aminoethylo)piperazine 140-31-8	EC ₅₀ / 48h EC ₅₀ / 72h LC ₅₀ /96h EC ₅₀ / 2h	Daphnia magna Pseudokirchnerella subcapitata (algae) Fisch Nitrifizierende Bakterien (nitrog.-fix.)	58 mg/l >1000 mg/l 2190 mg/l 511 mg/l
2,4,6- Tris(dimethylaminomethyl)phenol 90-72-2	No data	Belebtschlamm Desmodesmus subspicatus Mangrovenkrabbe Cyprinus carpio	2mg/l 84mg/l 750mg/l 175mg/l
Salicylic acid 69-72-7	EC ₅₀ / 48h EC ₅₀ / 72h LC ₅₀ /96h	Daphnia magna Desmodesmus subspicatus (algae) Pimephales promelas (fish)	870 mg/l >100 mg/l 1380 mg/l
Phenol, styrenated 61788-44-1	EC ₅₀ / 48h EC ₅₀ / 72h LC ₅₀ /96h	Daphnia magna Alge Scenedesmus (algae) Fisch	1-10 mg/l 3,14 mg/l 14,8 mg/l

12.2. Persistence and degradability

Hydrocarbons, C9, aromatic	Degr. 78% after 28 days. Readily biodegradable (OECD 301F)
2-methylpropan-1-ol	Degr. 70-80% after 28 days. Readily biodegradable (OECD 301 D)
1-2(-aminoethylo)piperazine	Degr. 0% after 28 days. Hardly biodegradable (OECD 301 F)

12.3. Bioaccumulative potential

2,6 – di-tetr-butylol-p-krezol	log Pow = 5,03
2-methylpropan-1-ol	log Pow = 1 (25 °C) (OECD 117)
1-2(-aminoethylo)piperazine	log Pow = -1,48 (20 °C)

12.4. Mobility in soil

1-2(-aminoethylo)piperazine $K_{oc} = 37000$

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

No reports on other adverse effects

Section 13: Disposal considerations

13.1. Waste treatment methods

- Product:** Minimum waste quantities. The product should not be disposed of with household waste. Avoid contamination of surface and ground water. Unused product dispose of as a chemical waste in licensed facility, in accordance with local regulations of environmental protection and binding legislation on recycling. Waste generated during the use of the product is recommended to be burned in a suitable incinerator. Small quantities of both components may be reacted together, allowed to cure and dispose of as a solid waste.
- Packaging:** The used product packaging (cartouche) can be sent to a plastic waste recycling plant. Contaminated package must be disposed of as unused product.
- European Waste Code:** 08 04 09 – waste adhesives and sealants containing organic solvents or other dangerous substances;
07 02 13 – waste plastic;
16 03 05 – organic wastes containing hazardous substances;
15 02 02 – absorbents, filter materials (including oil filters not otherwise specified); wiping cloths, protective clothing contaminated by hazardous substances;
15 01 10 – packaging containing residues of or contaminated by hazardous substances.

Law of December 14th, 2012 on waste (Journal of Laws No. 0, item 21, 2012 as amended);

Law of June 13th, 201 on packaging and packaging waste (Journal of Laws No. 0, item 888, 2013); Regulation of the Minister of Environment dated September 29th, 2014 on waste catalogue (Journal of Laws No. 0, item 1923, 2014).

Section 14: Transport information



14.1 UN number

ADR/RID/IATA/IMDG: UN 2735

14.2 UN proper shipping name

ADR/RID/IATA/IMDG: AMINES, SOLID, CORROSIVE, N.O.S. [Polyethylenepolyamines with the exception of those specified elsewhere in this Annex; 2-piperazin-1-ylethylamine]

14.3 Transport hazard class(es)

ADR/RID/IATA/IMDG:8

14.4 Packing group

ADR/RID/IATA/IMDG: II

14.5 Environmental hazards

Environmentally hazardous substance

14.6 Special regulations:

ADR/RID

Tunnel restriction code: E

Transport category: 2 – limited 333 kg

Limited amounts: 1 Kg

Remark article 375: Commodities transported in single or folded packaging, including net quantity for single packaging or interior packaging of liquid of 5l or less, or of net weight 5kg or less, don't underlie any of ADR rules, under condition that the packaging comply with general rules 4.1.1.1, 4.1.1.2 i 4.1.1.4 do 4.1.1.8.

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

Not applicable .

Section 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No 1907/2006 (text with EEA relevance).

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC of 20 December 1994 on packaging and packaging waste.

COMMISSION REGULATION (EU) 2018/669 of 16 April 2018 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

REGULATION (EU) No 528/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 May 2012 concerning the making available on the market and use of biocidal products.

15.2. Chemical safety assessment

Not applicable

Section 16: Other information

Full text of H-statements:	H314	Causes severe skin burns and eye damage.
	H312	Harmful in contact with skin.
	H361	Suspected of damaging fertility.
	H302	Harmful if swallowed.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H335	May cause respiratory irritation.
	H372	Causes damage to organs through prolonged or repeated exposure
	H411	Toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects.
	H302	Harmful if swallowed.
	H311	Toxic on contact with skin
	H314	Causes severe skin burns and eye damage

Hazard class:

Acute Tox. 3	Acute toxicity category 3
Acute Tox. 2	Acute toxicity category 2
Acute Tox. 4	Acute toxicity category 4
Asp. Tox. 1	Aspiration toxicity category 1
Eye Dam. 1	Serious eye damage category 1
Eye Irrit. 2	Eye irritation category 2
Skin Corr. 1B	Skin corrosive category 1B
Skin Sens. 1	Skin sensitization category 1

STOT SE 3	Specific target organ toxicity – Single exposure – category 3
Aquatic Chronic 2	Aquatic Chronic category 2
Aquatic Chronic 3	Aquatic Chronic category 3
Aquatic Acute 1	Aquatic acute category 1
Org. Perox. B	Organic peroxide category B
Org. Perox. E	Organic peroxide category E
STOT RE 2	Specific target organ toxicity – Repetitive exposure – category 2
STOT RE 1	Specific target organ toxicity – Repetitive exposure – category 1
Repr. 2	Reproductive toxicity, category 2

Acronyms and abbreviations

DNEL	Derived no-effect level
PNEC	Predicted No Effect Concentration
PBT	Persistent, bioaccumulative and toxicity substances
SvHc	Substances of Very High Concern
STOT	Repeated, Single Exposure
RE, SE	Specific Target Organ Toxicity
STOT	Registration, Evaluation, Authorisation and Restriction of Chemicals
REACH	Regulation No 1907/2006
	Predicted (No) Effect Concentration
P(N)EC	Median Lethal Dose
LD ₅₀	Lethal concentration, 50%
LC ₅₀	European Union
EU	European Standard
EN	Chemical Abstracts Service number

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

Classification according to Regulation (EC) No 1272/2008	Classification procedure
Eye Dam.1	Calculation method
Aquatic Chronic 2	Calculation method
Acute Tox.4	Calculation method
Skin Corr. 1B	Calculation method
STOT RE 1	Metoda obliczeniowa
Skin Sens. 1	Calculation method
Repr. 2	Calculation method

Alterations compared to the previous version 1, 9

Training advice:

People using the product professionally, should be trained in handling the product, safety and hygiene. Drivers should be trained and obtain the appropriate certificate in accordance with the ADR requirements.

The information contained in the Safety Data Sheet is based on current state of knowledge and applies to product with its identified use. The information is intended to aid the user in controlling the handling risks and not to guarantee product quality. If conditions of product use are not under manufacturer control, responsibility for safe use falls to the user. Employer is obliged to inform all employees working with the product, about possible hazards and personal protection specified in Safety Data Sheet.