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SECTION 1: SUBSTANCE/MIXTURE IDENTIFICATION AND MANUFACTURER/SUPPLIER IDENTIFICATION

1.1. Product identification 1K PRIMER SPRAY (WHITE, GREY, BLACK)

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

Recommended uses: Car repair. Only for professional users.

Uses advised against: Each type of use not mentioned above and in section 7.3 of the sheet.

1.3. Data of the safety data sheet supplier

Przedsiębiorstwo RANAL Sp. z o.o.

ul. Łódzka 3

42-240 Rudniki k. Częstochowy, PL

Tel.: +48 34 329 45 03 Fax: +48 34 320 12 16 Register number: 000029202 *

Person responsible for the safety data sheet

ranal@ranal.pl

1.4. Emergency telephone

+48 34 329 45 03 (from 8.00am to 03.00pm)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation no 1272/2008 (CLP):

Classification of this product has been performed according to Regulation no 1272/2008 (CLP).

Aerosol 1: Aerosols flammable, hazard category 1, H229. Aerosol 1: Aerosols flammable, hazard category 1, H222.

Eye Irrit. 2: Serious eye damage / eye irritation, hazard category 2, H319.

STOT SE 3: Toxic effect on target organs – single exposure, hazard category 3, narcosis effect, H336.

2.2. Label elements

Regulation no 1272/2008 (CLP).

Contains:

Acetone.

Butyl acetate.

Ethyl acetate.

Pictograms:





Warning word: Danger.

Hazard statements:

Aerosol 1: H229 Pressurized container: may burst if heated.

Aerosol 1: H222 Extremely flammable aerosol. Eye Irrit. 2: H319 Causes serious eye irritation.

Skin Irrit. 2: H315 Causes skin irritation.

STOT SE 3: H336 May cause drowsiness or dizziness.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P251: Do not pierce or burn, even after use.

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

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

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do –

continue rinsing.

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P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501: Dispose of contents/container to containers according to regulations concerning dangerous wastes or

containers and wastes in containers.

Additional information:

EUH066: Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No data.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Product identification

1K PRIMER SPRAY (WHITE, GREY, BLACK)

Description

Mixture based on chemical products.

Components:

According to Annex II to Regulation (EC) no 1907/2006 (point 3), product contains:

Identific	ation	Chemical name/	Classification	Concentr ation
CAS: EC: Index: REACH:	67-64-1 200-662-2 606-001-00-8 01-2119471330-49-XXXX	Acetone¹ ATP CLP00 Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336 – Danger	25 -<50%
CAS: EC: Index: REACH:	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32-xxxx	Xylene¹ ATP CLP00 Regulation 1272/2008	Acute Tox. 4: H312+H332; Flam. Liq. 3: H226; Skin Irrit. 2: H315 – Warning	10 -<25%
CAS: EC: Index: REACH:	74-98-6 200-827-9 601-003-00-5 01-2119486944-21-XXXX	Propane ¹ ATP CLP00 Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	10 -<25%
CAS: EC: Index: REACH:	106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX	Butane ATP CLP00 Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	10 -<25%
CAS: EC: Index: REACH:	123-86-4 204-658-1 607-025-00-1 01-2119485493-29-XXXX	Butyl acetate ATP CLP00 Regulation 1272/2008	Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	10 -<25%
CAS: EC: Index: REACH:	141-78-6 205-500-4 607-022-00-5 01-2119475103-46-XXXX	Ethyl acetate ¹ Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	10 -<25%
CAS: EC: Index: REACH:	111-76-2 203-905-0 603-014-00-0 01-2119475108-36-XXXX	2-buthoxyethanol ¹ Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Eye Irrit. 2: H319; Skin Irrit. 2: H315 – Warning	10 -<25%

¹ Substance mentioned voluntarily, which does not meet any of the criteria specified in the Commission Regulation (EU) no 2015/830.

More information on hazards posed by the substances - see section 8, 11, 12, 15 and 16 of the sheet.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Symptoms from poisoning may occur only after exposure, so in case of any doubts, direct exposure to a chemical product or a prolonged malaise, consult a doctor and show the Material Safety Data Sheet.

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Inhalation:

Remove the victim from the area of exposure, ensure access to fresh air and reposal. In severe cases, that is cardiac and breath arrest, perform artificial respiration (mouth to mouth method, cardiac massage, oxygen supply etc.) and immediately call medical help.

Contact with skin:

Take off contaminated clothes and footwear, clean the skin or wash the victim with natural soap rinsing with plenty of cold water. In case of serious disturbances consult a doctor. If the mixture has caused burns or frostbites, do not take off the victim's clothes, as in such case, when the clothes are stuck to the skin, it may cause more serious injuries. If blisters appear on skin, do not pierce them, as it may increase the risk of infection.

Contact with eyes:

Rinse eyes with plenty of water at room temperature for 10-15 minutes. Do not allow the victim to rub or close his eyes. Remove contact lenses if present, if they are not stuck to the eye, otherwise further injuries may be caused. In all cases, after washing the victim, consult a doctor as soon as possible and show this Material Safety Data Sheet.

Ingestion/aspiration:

Do not cause vomiting, and if they appear, keep the victim's head leaning forward, to prevent aspiration of stomach contents. Ensure quiet surrounding. Rinse mouth and throat, as probably they were contaminated when swallowing the product.

4.2. Most important symptoms both acute and delayed

Acute and delayed effects of exposure provided in sections 2 and 11 of the Sheet.

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

No data.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Use powder extinguishers (powder ABC), or use physical foam or extinguishers containing carbon dioxide (CO2). It is not recommended to use running water as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

As a result of combustion or thermal decomposition subproducts of reaction are generated which may be extremely toxic and in consequence pose serious health hazard.

5.3. Advice for firefighters

Depending on how big the fire is, it may be necessary to use full set of protective clothes and self contained breathing equipment. Have at disposal a minimum amount of emergency devices and means of action (fire blankets, handy first aid kit) in accordance with the Directive89/654/EC.

Additional recommendations:

Act in accordance with the Internal Emergency Plan and information leaflets describing how to deal with accidents and other emergency situations. Disable all sources of ignition. In case of fire, cool the vessels and tanks used to store products susceptible to ignition, explosion or BLEVE explosion due to high temperatures. Do not allow the products used to extinguish the fire to enter the water tank.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency measures

Isolate the places where gas escapes, if this activity does not pose a threat to people who carry it out. Evacuate the place and remove people who do not have adequate protection. In case of possible contact with a spilled product, it is obligatory to use personal protective equipment (see Section 8 of the Card). In the first place, prevent the formation of flammable air mixtures with vapours, both through ventilation and the use of an inertising agent. Disable all sources of ignition. Eliminate electrostatic charges by providing grounding and interconnection of all conductive surfaces on which static electricity can be generated.

6.2. Environmental precautions

This product has not been classified as dangerous. Do not allow contamination of ground and surface water, waterways, soil and sewage system.

6.3. Methods and materials for containment and cleaning up

It is recommended to:

Collect spilled product with sand or neutral absorbing material and move to a safe place. Do not use sawdust or other flammable absorbents. All information on disposal of the product provided in section 13 of the Sheet.

6.4. Reference to other sections

See also sections 8 and 13 of the Sheet.

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SECTION:7 HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe handling

Precautions necessary for safe handling of the product:

To prevent hazards in the workplace, comply with applicable law. Keep the vessels tightly closed. Control leaks and waste by disposing of them with safe methods (Section 6 of the Sheet). Do not allow spontaneous leakage from containers. Stay clean and tidy when handling hazardous products.

Technical recommendations for the prevention of fires and explosions:

Avoid evaporation of the product, as it contains flammable substances, the vapors of which can form mixtures with air, which are easily ignited in the presence of ignition sources. Control ignition sources (cell phones, sparks) and transfer the product slowly, so as not to generate electrostatic charges. Avoid direct contact and spraying the product. Information on the conditions and substances to be avoided to be found in section 10 of the Sheet.

Technical recommendations for the prevention of toxicological hazards:

Do not eat or drink when handling the product, after work wash hands with a suitable cleaning agent.

Technical recommendations for the prevention of environmental hazards:

It is recommended to keep an absorbent in the vicinity of the product (see section 6.3 of the Sheet).

7.2. Conditions for safe storage, including any incompatibilities

Technical aspects of storage: Minimum temperature: 5°C Maximum temperature: 35°C Maximum time: 36 months

General storage conditions:

Avoid heat sources, radiation and electrostatics. Keep away from foodstuffs. More information - see section 10.5 of the Sheet.

7.3. Special end use(s)

Apart from the instructions already mentioned, it is not necessary to follow any specific instructions on the use of this product

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION MEASURES

8.1. Control parameters

The limit values of occupational exposure of the following substances should be controlled:

Acetone		CAS: 67-64-1	EC: 200-662-2	
MPC	600 mg/m ³			
MPIC	1800 mg/m ³			
year	2015			
Xylene		CAS: 1330-20-7	EC: 215-535-7	
MPC	100 mg/m ³			
MPIC	mg/m³			
year	2015			
Butyl acet	tate	CAS: 123-86-4	EC: 204-658-1	
MPC	200 mg/m ³			
MPIC	950 mg/m ³			
year	2015			
Ethyl acet	ate	CAS: 141-78-6	EC: 205-500-4	
MPC	734 mg/m ³	·		
MPIC	1468 mg/m ³			
year	2015			
2-buthoxy	yethanol	CAS: 111-76-2	EC: 203-905-0	
MPC	98 mg/m ³			
MPIC	200 mg/m ³			
year	2015			
Propane		CAS: 74-98-6	EC: 200-827-9	
MPC	1800 mg/m ³			
MPIC	mg/m ³			
year	2015			
Butane		CAS: 106-97-8	EC: 203-448-7	
MPC	1900 mg/m ³			
MPIC	3000 mg/m ³			
year	2015			

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DNEL (Workers):

` ,		Short time expo	sure	Long term expos	sure
Identification		Systemic	Local	Systemic	Local
Acetone	Oral	No data	No data	No data	No data
CAS: 67-64-1	Skin	No data	No data	186 mg/kg	No data
EC: 200-662-2	Inhalation	No data	2420 mg/m ³	1210 mg/m ³	No data
Xylene	Oral	No data	No data	No data	No data
CAS: 1330-20-7	Skin	No data	No data	180 mg/kg	No data
EC: 215-535-7	Inhalation	289 mg/m ³	289 mg/m ³	77 mg/m ³	No data
Butyl acetate	Oral	No data	No data	No data	No data
CAS: 123-86-4	Skin	No data	No data	180 mg/m ³	No data
EC: 204-658-1	Inhalation	960 mg/m ³	960 mg/m ³	480 mg/m ³	480 mg/m ³
Ethyl acetate	Oral	No data	No data	No data	No data
CAS: 141-78-6	Skin	No data	No data	63 mg/kg	No data
EC: 205-500-4	Inhalation	1468 mg/m ³	1468 mg/m ³	734 mg/m ³	734 mg/m ³
2-buthoxyethanol	Oral	No data	No data	No data	No data
CAS: 111-76-2	Skin	89 mg/kg	No data	75 mg/kg	No data
EC: 203-905-0	Inhalation	663 mg/m ³	246 mg/m ³	98 mg/m ³	No data

DNEL (Population):

oner (Population).		Short time expos	sure	Long term expos	ure
Identification		Systemic	Local	Systemic	Local
Acetone	Oral	No data	No data	62 mg/kg	No data
CAS: 67-64-1	Skin	No data	No data	62 mg/kg	No data
EC: 200-662-2	Inhalation	No data	No data	200 mg/m ³	No data
Xylene	Oral	No data	No data	1,6 mg/kg	No data
CAS: 1330-20-7	Skin	No data	No data	108 mg/kg	No data
EC: 215-535-7	Inhalation	No data	No data	14,8 mg/m ³	No data
Butyl acetate	Oral	No data	No data	No data	No data
CAS: 123-86-4	Skin	No data	No data	No data	No data
EC: 204-658-1	Inhalation	859,7 mg/m ³	859,7 mg/m ³	102,34 mg/m ³	102,34 mg/m ³
Ethyl acetate	Oral	No data	No data	4,5 mg/kg	No data
CAS: 141-78-6	Skin	No data	No data	37 mg/kg	No data
EC: 205-500-4	Inhalation	734 mg/m ³	734 mg/m ³	367 mg/m ³	367 mg/m ³
2-buthoxyethanol	Oral	13,4 mg/kg	No data	3,2 mg/kg	No data
CAS: 111-76-2	Skin	44,5 mg/kg	No data	38 mg/kg	No data
EC: 203-905-0	Inhalation	426 mg/m ³	123 mg/m ³	49 mg/m ³	No data

PNEC:

PNEC:				
Xylene	Waste treatment plant	6,58 mg/L	Fresh water	0,327 mg/L
CAS: 1330-20-7	Soil	2,31 mg/kg	Marine water	0,327 mg/L
EC: 215-535-7	Intermittent	0,327 mg/L	Sediment (fresh water)	12,46 mg/kg
	Ingestion	No data	Sediment (marine water)	12,46 mg/kg
Butyl acetate	Waste treatment plant	35,6 mg/L	Fresh water	0,18 mg/L
CAS: 123-86-4	Soil	0,0903 mg/kg	Marine water	0,018 mg/L
EC: 204-658-1	Intermittent	0,36 mg/L	Sediment (fresh water)	0,981 mg/kg
	Ingestion	No data	Sediment (marine water)	0,0981 mg/kg
Ethyl acetate	Sewage treatment plant	650 mg/L	Fresh water	0,24 mg/L
CAS: 141-78-6	Soil	0,148 mg/kg	Marine water	0,024 mg/L
EC: 205-500-4	Intermittent	1,65 mg/L	Sediment (fresh water)	1,15 mg/kg
	Ingestion	200 g/kg	Sediment (marine water)	0,115 mg/kg
2-buthoxyethanol	Sewage treatment plant	463 mg/L	Fresh water	8,8 mg/L
CAS: 111-76-2	Soil	3,13 mg/kg	Marine water	0,88 mg/L
EC: 203-905-0	Intermittent	9,1 mg/L	Sediment (fresh water)	34,6 mg/kg
	Ingestion	20 g/kg	Sediment (marine water)	Brak danych

8.2. Exposure control

General health and safety measures at work:

As a precautionary measure, it is recommended to use protective clothing marked with the "CE marking". More information on protective clothing (storage, use, cleaning, maintenance, protection class ...) can be obtained in the information brochure provided by the manufacturer of protective clothing. The instructions in this section apply to the pure product. The instructions for the diluted product may vary depending on the degree of dilution, application, application method, etc. When determining the obligation to install emergency sprays and / or eye rinsers in storerooms, provisions concerning the storage of chemical products will be taken into account. More information can be found in sections 7.1 and 7.2 of the Sheet.

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All information contained in this point - due to the lack of information on the protective equipment owned by the company - should be treated as a recommendation to prevent the hazard when working with the product.

Respiratory protection:



Obligatory resporatory protection.

Equipment	Marking	CEN Standards	Remarks
A filter mask that protects against gases, vapours and particles	CAT III	EN 149:2001+A1:2009 EN 405:2001+A1:2009	Replace if you notice an increase in breathing resistance and sense of smell or taste of the contaminating substance.

Hands protection:



Obligatory hands protection.

Equipment	Marking	CEN Standards	Remarks
Reusable gloves that protect against chemical agents	CAT III	EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	Protection time (Breakthrough Time) given by the producer has to be longer than time of working with the product. Do not use protective cream after contact of the product with skin.

Eyes and face protection:



Obligatory face protection.

Equipment	Marking	CEN Standards	Remarks
Face protection	CAT II	EN 166:2001 EN 167:2001 EN 168:2001 EN ISO 4007:2012	Clean every day and disinfect regularly according to the producer's recommendations.

Body protection:



Obligatory body protection.

Obligatory body pro-	iccion.		
Equipment	Marking	CEN Standards	Remarks
Clothes protecting		EN 1149-1,2,3	Only for professional use. Clean regularly
against chemical		EN 13034:2005+A1:2009	according to the producer's instructions.
hazards, anti-	CAT III	EN ISO 13982-	
electrostatic and flame	CATIII	1:2004/A1:2010	
retardant		EN ISO 6529:2001	



Obligatory feet protection.

Equipment	Marking	CEN Standards	Remarks
Safety footwear protecting against chemical hazards with anti-electrostatic properties and resistant to high temperatures	CAT III	EN 13287:2008 EN ISO 20345:2011 EN 13832-1:2006	In case of any signs of damage, replace the footwear.

Additional measures of emergency protection

Emergency measures	Standards	Emergency measures	Standards
^ *	ANSI Z358-1 ISO 3864-	+	DIN 12 899 ISO 3864-1:2002
Emergency shower	1:2002	Rinser	

Environmental hazard control:

Pursuant to the Community law on environmental protection, it is recommended not to allow the product and its packaging to enter the environment. For more information, see section 7.1 of the Sheet.

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Volatile Organic Compounds:

According to the requirements Official Journal 2014 No 0, item 1546, this product has the following properties:

no data * no data *

VOC (content): 100% weight VOC density 20°C: 650 kg/m³ (650 g/L)

Average carbon content: 4,71
Average molecular weight: 86,14 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical appearance:

Physical state 20°C: aerosol
Appearance: liquid

Colour: according to marking on the label

Odour: no data*

Volatility:

Boiling point at pressure:

Vapour pressure 20°C:

Vapour pressure 50°C:

Evaporation rate 20°C:

no data *
no data *

Product characteristic:

Density 20°C: 850-950 kg/m³ Relative density 20°C: no data * Dynamic viscosity 20°C: no data * Kinematic viscosity 20°C: no data * no data * Kinematic viscosity 40°C: no data * Vapour density (with regard to air): **Concentration:** no data * no data * Ph: Vapour density 20°C: no data * n-octanol/water partition coefficient 20°C: no data * Solubility in water 20°C: no data * Solubility degree: no data * Breakdown point: no data * no data * Melting/freezing point: no data * Pressure in vessel:

Flammability:

Flashpoint: <0°C (propellant)

Autoignition point:

Bottom explosion limit:

Top explosion limit:

no data*

no data*

9.2. Other information

Explosive properties:

Oxidizing properties:

Surface tension 20°C: no data*
Refractive index: no data*

*No information on hazards posed by the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product is not reactive under the conditions of storage. See section 7 of the Sheet.

10.2. Chemical stability

Chemically stabile under conditions of storage and use.

10.3. Possibility of hazardous reactions

Not present, if the product is stored as recommended.

10.4. Conditions to be avoided

Use and store at room temperature.

Shocks and frictions: Not applicable. Contact with the air: Not applicable.

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Heating: Risk of ignition.
Sunlight: Avoid direct exposure.

Humidity: Not applicable.

10.5. Incompatible materials

Acids: Avoid strong acids.
Water: Not applicable.
Oxidants: Avoid direct contact.
Flammable materials: Not applicable.
Other: Avoid strong bases.

10.6. Hazardous decomposition products

For a detailed overview of the degradation products, read sections 10.3, 10.4 and 10.5 of the Sheet. Depending on the conditions of decomposition, as a result, complex mixtures of chemical substances may be released: carbon dioxide (CO2), carbon monoxide and other organic compounds. For more information, see section 5 of the Sheet.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

There is no experimental data regarding the toxicological properties of the product.

It contains glycols, the probability of health-related effects, and therefore it is recommended not to inhale its vapours for too long.

Health hazards:

In case of repeated, prolonged exposure or concentrations higher than established occupational exposure limits, side effects may appear depending on exposure method:

<u>Ingestion (acute effects):</u>

- Acute toxicity: Based on available data classification criteria are not met, but the product contains substances classified as dangerous if swallowed. For more information see section 3 of the Sheet.
- Caustic/Irritating: Swallowing significant dose of the product may cause irritation of throat, stomach-aches, dizziness and vomiting.

Inhalation (acute effects):

- Acute toxicity: Based on available data classification criteria are not met, but the product contains substances classified as dangerous if inhaled. For more information see section 3 of the Sheet.
- Caustic/Irritating: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. For more information see section 3 of the Sheet.

Contact with skin and eyes (acute effects):

- Contact with skin: in case of contact causes dermatitis.
- Contact with eyes: in case of contact causes damage.

CMR effects (carcinogenicity, mutagenicity and harmful effect on reproduction):

- Carcinogenicity: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous due to above mentioned effects. For more information see section 3 of the Sheet.
- May cause genetic defects: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. For more information see section 3 of the Sheet.
- May have harmful effect on reproduction: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. For more information see section 3 of the Sheet.

Allergic effect:

- Respiratory: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. More information see section 3 of the Sheet.
- Dermal: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. More information see section 3 of the Sheet.

<u>Toxic effect on target organs(STOT) exposure time:</u>

Exposure to high doses may have negative influence on nervous system causing headaches, nausea, dizziness, vomiting, lack of clarity of mind, and in severe cases it may lead to the loss of consciousness.

Toxic effect on target organs (STOT), repeated exposure:

- Toxic effect on target organs (STOT), repeated exposure: Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. For more information see section 3 of the Sheet.
- Skin: Repeated exposure may cause skin dryness or cracking.

Aspiration hazard:

Based on available data classification criteria are not met. The product does not contain substances classified as dangerous. For more information see section 3 of the Sheet.

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Other information:

No data.

Detailed toxicological information on the substances:

Identification	Acute to	xicity		Rodzaj
Acetone	LD50	Oral	5800 mg/kg	rat
CAS: 67-64-1	LD50	Dermal	7426 mg/kg	rabbit
EC: 200-662-2	LC50	Inhalation	76 mg/L (4h)	rat
Xylene	LD50	Oral	2100 mg/kg	rat
CAS: 1330-20-7	LD50	Dermal	1100 mg/kg (ATEi)	rat
EC: 215-535-7	LC50	Inhalation	11 mg/L (4h) (ATEi)	
Butyl acetate	LD50	Oral	12789 mg/kg	rat
CAS: 123-86-4	LD50	Dermal	14112 mg/kg	rabbit
EC: 204-658-1	LC50	Inhalation	23,4 mg/L (4h)	rat
Ethyl acetate	LD50	Oral	4100 mg/kg	rat
CAS: 141-78-6	LD50	Dermal	20000 mg/kg	rabbit
EC: 205-500-4	LC50	Inhalation	>20 mg/L (4h)	
2-buthoxyethanol	LD50	Oral	500 mg/kg	rat
CAS: 111-76-2	LD50	Dermal	1100 mg/kg	rat
EC: 203-905-0	LC50	Inhalation	11 mg/L (4h)	rat
Propane	LD50	Oral	>2000 mg/kg	
CAS: 74-98-6	LD50	Dermal	>2000 mg/kg	
EC: 200-827-9	LC50	Inhalation	>5 mg/L (4h)	
Butane	LD50	Oral	>2000 mg/kg	
CAS: 106-97-8	LD50	Dermal	>2000 mg/kg	
EC: 203-448-7	LC50	Inhalation	658 mg/L (4h)	rat

SECTION 12: ECOLOGICAL INFORMATION

There is no experimental data regarding eco toxicological properties of the mixture itself.

12.1. Toxicity

Identification	Acute to	xicity	Туре	Туре
Acetone	LC50	5540 mg/L (96h)	Oncorhynchus mykiss	fish
CAS: 67-64-1	EC50	23,5 mg/L (48h)	Daphnia magna	crustacea
EC: 200-662-2	EC50	3400 mg/L (48h)	Chlorella pyrenoidosa	lagae
Xylene	LC50	13,5 mg/L (96h)	Oncorhynchus mykiss	fish
CAS: 1330-20-7	EC50	0,6 mg/L (96h)	Gommarus lacustris	crustacea
EC: 215-535-7	EC50	10 mg/L (72h)	Skeletonema costatum	algae
Butyl acetate	LC50	62 mg/L (96h)	Pimephales pro melas	fish
CAS: 123-86-4	EC50	73 mg/L (24h)	Daphnia magna	crustacea
EC: 204-658-1	EC50	675 mg/L (72h)	Skeletonema costatum	algae
Ethyl acetate	LC50	230 mg/L (96h)	Oncorhynchus mykiss	fish
CAS: 141-78-6 EC: 205-500-4	EC50	717 mg/L (48h)	Gommarus lacustris	crustacea
	EC50	3300 mg/L (48h)	Skeletonema costatum	algae
2-buthoxyethanol	LC50	1490 mg/L (96h)	Pimephales pro melas	fish
CAS: 111-76-2 EC: 203-905-0	EC50	1815 mg/L (48h)	Daphnia magna	cruustacea
	EC50	911 mg/L (72h)	Skeletonema costatum	algae

12.2. Persistence and degradability

Identification	Degradability		Biodegradability	
Acetone	BOD5	No data	Concentration	100 mg/L
CAS: 67-64-1 EC: 200-662-2	COD	No data	Time	28 days
	BOD5/COD	0,96	% biodegradable	96 %
Butyl acetate CAS: 123-86-4 EC: 204-658-1	BOD5	No data	Concentration	No data
	COD	No data	Time	5 days
	BOD5/COD	0,79	% biodegradable	84 %
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	BOD5	1.36 g O2/g	Concentration	100 mg/L
	COD	1,69. g O2/g	Time	14 days
	BOD5/COD	0,81	% biodegradable	83 %
2-buthoxyethanol CAS: 111-76-2 EC: 203-905-0	BOD5	0.71.g O2/g	Concentration	100 mg/L
	COD	2.2.g O2/g	Time	14 days
	BOD5/COD	0,32	% biodegradable	96 %

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12.3. Bioaccumulative potential

Identification	Bioaccumulative po	otential
Acetone	BCF	1
CAS: 67-64-1	Log POW	-0,24
EC: 200-662-2	Potential	Low
Propane	BCF	13
CAS: 74-98-6	Log POW	2,86
EC: 200-827-9	Potential	Low
Butane	BCF	33
CAS: 106-97-8	Log POW	2,89
EC: 203-448-7	Potential	Medium
Xylene	BCF	9
CAS: 1330-20-7	Log POW	2,77
EC: 215-535-7	Potential	Low
Butyl acetate	BCF	4
CAS: 123-86-4	Log POW	1,78
EC: 204-658-1	Potential	Low
Ethyl acetate	BCF	30
CAS: 141-78-6	Log POW	0,73
EC: 205-500-4	Potential	Medium
2-buthoxyethanol	BCF	3
CAS: 111-76-2	Log POW	0,83
EC: 203-905-0	Potential	Low

12.4. Mobility in soil

12.4. Mobility in so	<u> </u>			
Identification	Absorption/ desorp	tion	Variability	
Aceton	Koc	1	Henre's constant	2,93 Pa·m³/mol
CAS: 67-64-1 EC: 200-662-2	Conclusions	Very high	Dry soil	Yes
	Surface tension	2,304E-2 N/m (25°C)	Wet soil	Yes
Propane	Koc	460	Henre's constant	71636,78 Pa·m³/mol
CAS: 74-98-6	Conclusions	Medium	Dry soil	Yes
EC: 200-827-9	Surface tension	7,02E-3 N/m (25°C)	Wet soil	Yes
Butane	Кос	900	Henre's constant	96258,75 Pa·m³/mol
CAS: 106-97-8	Conclusions	Low	Dry soil	Yes
EC: 203-448-7	Surface tension	1,187E-2 N/m (25°C)	Wet soil	Yes
Ksylen CAS: 1330-20-7 EC: 215-535-7	Koc	202	Henre's constant	524,86 Pa·m³/mol
	Conclusions	Medium	Dry soil	Yes
	Surface tension	No data	Wet soil	Yes
Butyl acetate	Koc	No data	Henre's constant	No data
CAS: 123-86-4 EC: 204-658-1	Conclusions	No data	Dry soil	No data
	Surface tension	2,478E-2 N/m (25°C)	Wet soil	No data
Ethyl acetate	Koc	59	Henre's constant	13,58 Pa·m³/mol
CAS: 141-78-6 EC: 205-500-4	Conclusions	Very high	Dry soil	Yes
	Surface tension	2,324E-2 N/m (25°C)	Wet soil	Yes
2- buthoxyethanol CAS: 111-76-2 EC: 203-905-0	Koc	8	Henre's constant	1,621E-1 Pa·m³/mol
	Conclusions	Very high	Dry soil	No
	Surface tension	2,729 E-2 N/m (25°C)	Wet soil	Yes

12.5. Results of PBT and vPvB assessment

The product does not meet the criteria of PBT/vPvB.

12.6. Other hazardous effects

Not specified.

SECTION 13: DISPOSAL CONSIDERATIONS

Code	Description	Waste type (Commission Regulation (EU) no 1357/2014)
	A specific European Waste Catalogue code () cannot be assigned because it depends on the way it is used by the user	Dangerous

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Waste type (Commission Regulation (EU) no 1357/2014):

HP3 Flammable, HP4 Irritating — causes skin irritation and eye damage, HP5 Toxic effect on target organs (STOT) or aspiration hazard, HP6 Acute toxicity.

Waste management (disposal and assessment):

Pass to entities authorized to assess and dispose of wastes according to Annex 1 and Annex 2 (Directive of the European Parliament and of the Council 2008/98/EC) and Official Journal 2013 No 0, item 21. According to code 15 01 (2014/955/EU), if the container is in direct contact with the product, it should be treated as the product itself. Otherwise it should be treated as non harmful waste. It is recommended not to let it enter the waterways. See subsection 6.2 of the Sheet.

Provisions concerning waste management:

According to Annex II to the Regulation (EC) no 1907/2006 (REACH) national or Community provisions concerning waste management.

Community Law:

Directive 2008/98/EC, 2014/955/EU, Commission Regulation (EU) no 1357/2014.

SECTION 14: TRANSPORT INFORMATION

Road transport of dangerous goods:

According to requirements of ADR 2017 and RID 2017:

14.1. UN number

1950

14.2. UN proper shipping name

AEROSOLS, flammable

14.3. Transport hazard class(-es)

2

Labels: 2.1

14.4. Packaging group

N/A

14.5. Environmental hazards

No.

14.6. Special precautions for users

Special precautions for users: 190, 327, 344, 625

Tunnel restriction code:

Physical and chemical properties: See section 9

Limited quantities:

14.7. Transport in bulk according to Annex II of MARPOL 73/78 Convention and the IBC Code No data.

D

1 L

Marine transport of dangerous goods:

According to requirements of IMDG 38-16:

14.1. UN number

1950

14.2. UN proper shipping name

AEROSOLS, Flammable

14.3. Transport hazard class(-es)

2

Labels: 2.1

14.4. Packaging group

N/A

14.5. Environmental hazards

No.

14.6. Special precautions for users





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ative occupational exposure limit

icative occupational exposure limit

2/EEC and 2000/39/EC

Special precautions for users:

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EmS codes: Physical and chemical properties:

Limited quantities:

190, 277, 327, 344, 63, 959

F-D, S-U See section 9

1 L

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

No data.

Air transport of dangerous goods:

According to requirements of IATA/ICAO 2017:

14.1. UN number

1950

14.2. UN proper shipping name

AEROSOLS, flammable

14.3. Transport hazard class(-es)

2

Labels: 2.1

14.4. Packaging group

N/A

14.5. Environmental hazards

No.

14.6. Special precautions for users

Physical and chemical properties: See section 9 of the sheet.

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

No data.

SECTION 15: REGULATORY INFORMATION

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

Substances candidating to authorization according to the Regulation (EC) 1907/2006(REACH): No data. Substances present in Annex XIV REACH (authorization list) and expiration date: No data. Regulation (EC) no 1005/2009 on substances that deplete the ozone layer: No data. Article 95, REGULATION of the EUROPEAN PARLIAMENT and of the COUNCIL (EU) NO 528/2012: No data.

REGULATION (EU) No 649/2012, on import and export of dangerous chemicals: No data.

Restrictions on trade and use of some of dangerous substances and mixtures (Annex XVII REACH etc...): Regulation of the European Parliament and of the Council (EU) no 98/2013 of January 15 2013 on the marketing and use of explosives precursors: contains acetone. The product complies with the provisions of the article 9.

Specific provisions regarding the protection of people or the environment:

It is recommended to use the information collected in this safety data sheet as preliminary data to estimate local hazards in order to take the necessary steps to prevent the risk related to handling the product, as well as its use, storage and disposal. Other provisions:

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the
 Registration, Evaluation, Authorisation 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 the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the heat chemical agents at work.
- Commission Directive 2006/15/EC of 7 February 2006 establishing a second values in implementation of Council Directive 98/24/EC and amending Directive 98/24/EC
- Commission Directive 2009/161/EU of 17 December 2009 establishing a tl
 values in implementation of Council Directive 98/24/EC and amending Cor
- values in implementation of Council Directive 98/24/EC and amending Cor ctive 2000/39/EC
 Regulation (EU) No 98/2013 of the European Parliament and of the Council of 15 January 2013 on the marketing and use of explosives precursors.
- Council Directive of May 20 1975 on approximation of the laws of Member States relating to aerosol dispensers.

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- Commission Directive 94/1/EC of 6 January 1994 adapting some technicalities of Council Directive 75/324/EEC on the approximation of the laws of the relating Member States to aerosol dispensers.
- Commission Directive 2008/47/EC of 8 April 2008 amending, for the purposes of adapting to technical progress, Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers
- Commission Directive 2013/10/EU of 19 March 2013 amending Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

SECTION 16: OTHER INFORMATION

Regulations concerning Material Safety Data Sheet:

This Material Safety Data Sheet has been issued pursuant to ANEX II-Guidance on the Compilation of Material Safety Data Sheets – to the Regulation (EC) No 1907/2006 (Regulation (EC) No 453/2010, Regulation (EU) No 2015/830).

Texts of the regulation mentioned in section 2 of the Sheet:

H319: Causes eye irritation

H336: May cause drowsiness or dizziness

H315: Causes skin irritation

H229: Pressurized container: may burst if heated

H222: Extremely flammable aerosol

Texts of the Regulation mentioned in section 3 of the Sheet:

The following phrases are not related to the product itself, they are given only for informative purposes and refer to particular components mentioned in section 3.

Regulation no 1272/2008 (CLP):

Acute Tox. 4: H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled

Acute Tox. 4: H312+H332 Harmful in contact with skin or if inhaled.

Eye Irrit. 2: H319 Causes eye irritation. Flam. Gas 1: H220 Extremely flammable gas.

Flam. Liq. 2: H225 Highly flammable liquid and vapours.

Flam. Liq. 3: H226 Flammable liquid and vapours.

Press. Gas: H280 Contains pressurized gas, may burst if heated.

Skin Irrit. 2: H315 Causes skin irritation.

STOT SE 3: H336 May cause drowsiness or dizziness.

Classification process:

Eye Irrit. 2: Calculation system STOT SE 3: Calculation system Aerosol 1: Calculation system Aerosol 1: Calculation system

Recommendations on personnel training:

It is recommended for the personnel who will come into contact with this product to be trained at a basic level in the field of occupational safety in order to facilitate the understanding and interpretation of the safety data sheet and product label.

Main literature sources:

http://echa.europa.eu http://eur-lex.europa.eu

Abbreviations used in the text:

Suppl. class.: Supplier classification

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

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association ICAO: International Civil Aviation Organization COD: Chemical Oxygen Demand (COD)

BOD: Biochemical Oxygen Demand (BOD) in 5 days

BCF: Bioconcentration potential

Log POW: log of octanol/water partition coefficient MPC: maximum permissible concentration

MPIC: Maximum permissible instantaneous concentration

EC50: effective concentration (concentration of the component at which 50% of the research population has an effect at a

given time)

LD50: median lethal dose

LC50: median lethal concentration

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EC50: median effective concentration

PBT: bioaccumulative potential of toxic substances

vPvB: very high bioaccumulative potential of toxic substances

PPM: personal protection measures STP: sewage treatment plant

Henry: solubility of a given component in a solution depending on the partial pressure of this component over the solution

EC: EINECS and ELINCS number (see also EINECS and ELINCS)
EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances
CEN: European Committee for Standardization

STOT: toxic effect on target organs

Koc: the partition coefficient normalized to the organic carbon content; it determines the degree of organic substance

absorption in soil

DNEL: derived no effect level

PNEC: predicted no effect concentration

Changes in relation to previous material safety data sheet influencing hazard management:

Marked with symbol * (unless the footnote says otherwise).

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