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

1.1. Product identification
ACRYLIC CLEAR COAT MAT
ACRYLIC CLEAR COAT GLOSS

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use: car repair. For professional use in car refinish.

Use advised against: Each type of use not mentioned above and in section 7.3 of this Material Safety Data 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
Registration number: 000029202

Person responsible for the safety data sheet:
ranal@ranal.pl

1.4. Emergency telephone
+48 34 329 45 03 (8.00am to 03.00pm)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of substance or mixture

Regulation no 1272/2008 (CLP):
Classification of the product 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, narcotic effect, H336.

2.2. Label elements

Regulation No 1272/2008 (CLP):

Pictograms:

Signal 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.
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.
P211: Do not spray over open flame or other ignition source.
P251: Do not pierce or burn, even after use.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
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.
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 on dangerous wastes or containers and wastes in containers.

Additional information:
EUH066: Repeated exposure may cause skin dryness or cracking.

Substances relevant for classification:
Acetone.
Ethyl acetate.
Butyl acetate.
Propan-2-ol.

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
Not applicable.

3.2. Mixtures

Description:
A mixture based on chemical products.

Components:
According to Annex II to the Regulation (EC) 1907/2006 (point 3).

Acetone[1]
25 – <50%
EC: 200-662-2
CAS: 67-64-1
Index No: 606-001-00-8

Regulation 1272/2018:
Eye Irrit. 2, H319; Flam. Liq. 2, H225; STOT SE 3, H336; EUH066 – Danger.

Dimethyl ether[2]
10 – <25%
EC: 204-065-8
CAS: 67-64-1
Index No: 603-019-00-8

Regulation 1272/2018:
Flam. Gas 1, H220; Press. Gas: H280 – Danger.

Ethyl acetate[1]
1 – <10%
EC: 205-500-4
CAS: 141-78-6
Index No: 607-022-00-5

Regulation 1272/2018:
Eye Irrit. 2, H319; Flam. Liq. 2, H225; STOT SE 3, H336; EUH066 – Danger.

Butyl acetate[1]
1 – <10%
EC: 204-658-1
CAS: 123-86-4
Index No: 607-025-00-1

Regulation 1272/2018:
Flam. Liq. 3, H226; STOT SE 3, H336; EUH066 – Warning.

2-methoxy-1-methyl ethyl acetate[2]
1 – <10%
EC: 203-603-9
CAS: 108-65-6
Index No: 607-195-00-7

Regulation 1272/2018:
Flam. Liq. 3, H226 – Warning.

Propan-2-ol[1]
1 – <10%
EC: 200-661-7
CAS: 67-63-0
Index No: 603-117-00-0

Regulation 1272/2018:
Eye Irrit. 2, H319; Flam. Liq. 2, H225; STOT SE 3, H336 – Danger.

Butan-1-ol[1]
1 – <10%
EC: 200-751-6
CAS: 71-36-3
Index No: 603-004-00-6
Regulation 1272/2018.

[1] Substance which is health or environmentally hazardous; meets the criteria set out in Commission Regulation (EU) No 2015/830.
[2] Substance with an EU-wide maximum occupational exposure limit value.

More information on the types of hazard and hazard statements provided in section 16 of the Sheet.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

Poisoning symptoms may occur some time after the exposure, so in case of any doubts, direct exposure to chemical product or long lasting malaise consult a doctor and show him this Material Safety Data Sheet.

Respiratory tract:
Remove the victim from the area of exposure, ensure fresh air and rest. In severe cases, that is cardiac arrest and no breath, perform artificial respiration (mouth to mouth method, heart massage, oxygen supply, etc.) and immediately call for medical help.

Skin:
Take off contaminated clothes and shoes, clean the skin or wash the victim with natural soap and rinse with plenty of cold water. In case of serious complaints consult a doctor. If the mixture has caused burns or frostbites, do not take off the victim's clothes, as if it is stuck to the skin, the action may cause more severe injuries. Do not pierce the blisters on skin, if present, as it may increase the risk of infection.

Eyes:
Rinse eyes thoroughly with water at room temperature for 15 minutes. Do not allow the victim to rub or close his eyes. If the victim uses contact lenses, they should be removed unless they are stuck to the eye, otherwise further injury may be caused. In all cases, after washing the victim, consult a doctor as soon as possible and show him the Material Safety Data Sheet.

Alimentary tract:
Do not induce vomiting and if it occurs, keep the head tilted forward to prevent aspiration of stomach contents. Ensure calmness. Rinse mouth and throat, as most likely have been contaminated by ingestion of the product.

4.2. Most important symptoms both acute and delayed
Acute and delayed symptoms of exposure are given 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 (ABC powder), alternatively use physical foam or fire extinguishers containing carbon dioxide (CO_2). IT IS NOT RECOMMENDED using running water as an extinguishing medium.

5.2. Special hazards arising from the substance or mixture
As a result of combustion or thermal decomposition, reaction sub-products are formed that can be highly toxic and, consequently, can pose a serious health risk.

5.3. Advice for firefighters
Depending on the size of the fire, it may be necessary to use complete protective clothing and autonomous breathing equipment.

It is necessary to have at disposal a minimum amount of emergency devices and protective measures (fire blankets, first aid kit) in accordance with Directive 89/654/EC.

Act in accordance with the Internal Emergency Plan and information leaflets describing how to deal with accidents and other emergency situations. Disable all ignition sources. In case of fire, cool the vessels and containers 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 areas where gas escapes, if this activity does not pose a threat to people who carry it out. Evacuate the area and remove people who do not have adequate protection. In case of any contact with a spilled product, it is necessary to use personal protective equipment (see section 8). First of all prevent the formation of flammable mixtures of air and vapours, both by ventilation and the use of an inertising agent. Disable all ignition sources. Eliminate electrostatic charges by providing grounding and interconnection of all conductive surfaces on which static electricity can be generated.

6.2. Environmental precautions
The product has not been classified as dangerous. Prevent contamination of ground and surface water, waterways, soil and sewage system.

6.3. Methods and materials for containment and cleaning up.
Recommendations:
Absorb spilled product with sand or neutral absorbent and move it to a safe place. Do not use sawdust or other flammable absorbents. All the information on product disposal can be found in section 13 of the Sheet.

6.4. Reference to other sections
See also sections 8 and 13 of the Sheet.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe handling

A. Precautions necessary for the 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 removing them with safe methods (section 6). Prevent any spontaneous leakage from containers. Keep the area neat and clean when handling hazardous products.

B. Technical precautions for prevention of fires and explosions:
Prevent evaporation of the product, as it contains flammable substances, the vapours of which may form with air easily flammable mixtures in the presence of ignition sources. Control ignition sources (cell phones, sparks and transfer the product slowly to prevent formation of electrostatic charges. Avoid direct contact and spraying the product. Information on the conditions and substances to be avoided can be found in section 10 of the Sheet.

C. Technical precautions for prevention of toxicological hazards.
Do not eat or drink while handling the product. After work wash hands with proper cleaning agent.

D. Technical precautions for prevention of environmental hazards
It is recommended to keep an absorbing agent 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:
Min. temp. 10°C
Max. temp. 25°C
Maximum storage time: 36 months

7.3. Special end use(s)
Except from the instructions already mentioned, it is not necessary to follow any specific precautions on the use of this product.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION MEASURES

8.1. Control parameters
Occupational exposure limit values should be monitored for the following substances:

CAS NUMBER	SUBSTANCE	MPC (mg/m³)	MPIC (mg/m³)	MPCC (mg/m³)
67-64-1	Acetone	600	1800	---
115-10-6	Dimethyl ether	1000	---	---
141-78-6	Ethyl acetate	734	1468	---
74-98-6	Propane	1800	---	---
123-86-4	Butyl acetate	200	950	---
106-97-8	Butane	1900	3000	---
108-65-6	2-methoxy-1-methyl ethyl acetate	260	520	---
71-36-3	Butan-1-ol	50	150	---
67-63-0	Propan-2-ol	900	1200	---

DNEL (Workers):

Identification		Short time exposure		Long time exposure	
		Systemic	Local	Systemic	Local
Acetone CAS: 67-64-1 EC: 200-662-2	Oral	No data	No data	No data	No data
	Dermal	No data	No data	186 mg/kg	No data
	Inhalation	No data	2420 mg/m³	1210 mg/m³	No data
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	No data	No data	No data	No data
	Dermal	No data	No data	No data	No data
	Inhalation	No data	No data	1894 mg/m³	No data
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Oral	No data	No data	No data	No data
	Dermal	No data	No data	63 mg/m³	No data
	Inhalation	1468 mg/m³	1468 mg/m³	734 mg/m³	734 mg/m³
Butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	No data	No data	No data	No data
	Dermal	No data	No data	No data	No data
	Inhalation	960 mg/m³	960 mg/m³	480 mg/m³	480 mg/m³
2-methoxy-1-methyl ethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	No data	No data	No data	No data
	Dermal	No data	No data	153.5	No data
	Inhalation	No data	No data	275 mg/m³	No data
Propan+2+ol CAS: 67-63-0 EC: 200-661-7	Oral	No data	No data	No data	No data
	Dermal	No data	No data	888 mg/kg	No data
	Inhalation	No data	No data	500 mg/m³	No data
Butan-1-ol CAS: 71-36-3 EC: 200-751-6	Oral	No data	No data	No data	No data
	Dermal	No data	No data	No data	No data
	Inhalation	No data	No data	No data	310 mg/m³

DNEL (Population):

Identification		Short time exposure		Long time exposure	
		Systemic	Local	Systemic	Local
Acetone CAS: 67-64-1 EC: 200-662-2	Oral	No data	No data	62 mg/kg	No data
	Dermal	No data	No data	62 mg/kg	No data
	Inhalation	No data	No data	200 mg/kg	No data
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	No data	No data	No data	No data
	Dermal	No data	No data	No data	No data
	Inhalation	No data	No data	471 mg/m³	No data
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Oral	No data	No data	4,5 mg/kg	No data
	Dermal	No data	No data	37 mg/kg	No data
	Inhalation	734 mg/m³	734 mg/m³	367 mg/m³	367 mg/m³
Butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	No data	No data	No data	No data
	Dermal	No data	No data	No data	No data
	Inhalation	859.7 mg/m³	859.7 mg/m³	102.34 mg/m³	102.34 mg/m³
2-methoxy-1-methyl ethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	No data	No data	1.67 mg/kg	No data
	Dermal	No data	No data	54.8 mg/kg	No data
	Inhalation	No data	No data	33 mg/m³	No data
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	Oral	No data	No data	26 mg/kg	No data
	Dermal	No data	No data	319 mg/kg	No data
	Inhalation	No data	No data	89 mg/m³	No data
Butan-1-ol CAS: 71-36-3 EC: 200-751-6	Oral	No data	No data	3.125 mg/m³	No data
	Dermal	No data	No data	No data	No data
	Inhalation	No data	No data	No data	55 mg/m³

PNEC:

Identification				
Acetone CAS: 67-64-1	Sewage treatment plant	100 mg/L	Fresh water	10.6 mg/L

EC: 200-662-2	Soil	29.5 mg/L	Marine water	1.06 mg/L
	Intermittent	21 mg/L	Sediment (fresh water)	30.4 mg/L
	Ingestion	No data	Sediment (marine water)	3.04 mg/L
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Sewage treatment plant	160 mg/L	Fresh water	0.155 mg/L
	Soil	0.045 mg/kg	Marine water	0.016 mg/L
	Intermittent	1.549 mg/L	Sediment (fresh water)	0.681 mg/kg
	Ingestion	No data	Sediment (marine water)	0.069 mg/kg
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	Sewage treatment plant	650 mg/L	Fresh water	0.24 mg/L
	Soil	0.148 mg/kg	Marine water	0.024 mg/L
	Intermittent	1.65 mg/L	Sediment (fresh water)	1.15 mg/kg
	Ingestion	200 g/kg	Sediment (marine water)	0.115 mg/kg
Butyl acetate CAS: 123-86-4 EC: 204-658-1	Sewage treatment plant	35.6 mg/L	Fresh water	0.18 mg/L
	Soil	0.0903 mg/kg	Marine water	0.018 mg/L
	Intermittent	0.36 mg/L	Sediment (fresh water)	0.981 mg/kg
	Ingestion	No data	Sediment (marine water)	0.0981 mg/kg
2-methoxy-1-methyl ethyl acetate CAS: 108-65-6 EC: 203-603-9	Sewage treatment plant	100 mg/L	Fresh water	0.635 mg/L
	Soil	0.29 mg/kg	Marine water	0.0635 mg/L
	Intermittent	6.35 mg/L	Sediment (fresh water)	3.29 mg/kg
	Ingestion	No data	Sediment (marine water)	0.329 mg/kg
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	Sewage treatment plant	2251 mg/L	Fresh water	140.9 mg/L
	Soil	28 mg/kg	Marine water	140.9 mg/L
	Intermittent	140.9 mg/L	Sediment (fresh water)	552 mg/kg
	Ingestion	160 g/kg	Sediment (marine water)	552 mg/kg
Butan-1-ol CAS: 71-36-3 EC: 200-751-6	Sewage treatment plant	2476 mg/L	Fresh water	0.082 mg/L
	Soil	0.015 mg/kg	Marine water	0.0082 mg/L
	Intermittent	2.25 mg/L	Sediment (fresh water)	0.178 mg/kg
	Ingestion	No data	Sediment (marine water)	0.0178 mg/kg

8.2. Exposure control

A. General measures of safety and hygiene in a workplace.
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 etc.) 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 directions for the thinned product may vary depending on the degree of thinning, use, application method, etc. In determining the obligation to install emergency showers and / or eye rinsers in warehouses, provisions regarding 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.

All the information contained in this section – due to the lack of information concerning protective equipment of the company – shall be treated as recommendation for prevention of hazards when working with the product.

B. Respiratory protection.
Obligatory respiratory protection.

Pictograms:

Equipment: A filter mask that protects against gases, vapours and particles.

CEN standards:
EN 149:2001+A1:2009

EN 405:2001+A1:2009
Remarks: Replace if you notice an increase in breathing resistance and sense of smell or taste of the pollutant.

C. Special hands protection.
Obligatory hands protection.

Pictograms:

Equipment: Reusable gloves that protect against chemical agents.

CEN standards:
EN 374-1:2003
EN 374-3:2003/AC:2006
EN 420:2003+A1:2009

Remarks: Protection time (Breakthrough Time) given by the producer must be longer than the time of use of the product. Do not use protective cream after contact of the product with skin.
As the product is a mixture of various substances and it is not possible to check the glove's resistance beforehand in a completely reliable way, therefore it must be checked before use.

D. Eyes and face protection.
Obligatory eyes and face protection.

Pictograms:

Equipment: Face shield.
CEN standards:
EN 166:2001
EN 167:2001
EN 168:2001
EN ISO 4007:2012

Remarks: Clean every day and disinfect according to the producer’s recommendations.

E. Body protection.
Obligatory body protection.
Obligatory feet protection.

Pictograms:

CEN standards (body protection):
EN 1149 – 1, 2, 3
EN 13034:2005+A1:2009
EN ISO 13982-1:2004/A1:2010
EN ISO 6529:2001
EN ISO 6530:2005
EN ISO 13688:2013
EN 464:1994

CEN standards (feet protection):
EN 13287:2008
EN ISO 20345:2011
EN 13832-1:2006

Remarks:
Body protection: Only for professional use. Clean regularly according to producer's recommendations.
Feet protection: In case of any signs of damage change footwear.

F. Additional measures of emergency protection.

Emergency shower
ANSI Z358-1
ISO 3864-1:2202

Eye rinsing device
DIN 12 899
ISO 3864-1:2002

8.2. Exposure control

Environmental exposure 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.

Volatile Organic Compouds:
According to national requirements, this product has the following properties:

VOC (content):	93.8% of the mass
Density VOC 20^0C:	717.6 kg/m^3 (717,6 g/L)
Average carbon content:	3.85
Average molecular weight:	77.71 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
See product data sheet for more information.

Physical appearance:

Physical state 20°C:	aerosol
Appearance:	gas
Colour:	according to labelling on packaging
Odour:	solvent
Odour threshold:	no data *

Volatility:

Boiling point at pressure:	-25°C (propellant)
Vapour pressure 20°C:	no data *
Vapour pressure 50°C:	<30000 Pa (300 Pa)
Evaporation rate:	no data *

Product characteristic:

Density 20°C:	750-780 kg/m^3
Relative density 20°C:	no data *
Dynamic viscosity 20°C:	no data *
Kinematic viscosity 20°C:	no data *
Kinematic viscosity 40°C:	no data *
Concentration:	no data *
Ph:	no data *
Vapour density 20°C:	no data *
n-octanol/water partition coefficient 20°C:	no data *
Solubility in water 20°C:	no data *
Degree of solubility:	no data *
Breakdown point:	no data *
Melting / freezing point:	no data *
Pressure in container:	no data *

Explosive properties:	no data *
Oxidizing properties:	no data *

Flammability:

Flash point:	-41°C (propellant)
Flammability (solid, gas):	no data *
Autoignition point:	240°C (propellant)
Bottom flammability limit:	no data *
Top flammability limit:	no data *

Explosive properties:

Bottom explosion limit:	no data *
Top explosion limit:	no data *

9.2. Other information

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

* No information on hazards caused by the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
The product is not reactive in 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
There are no hazardous reactions if the product is stored as recommended.

10.4. Conditions to be avoided
Use and store at room temperature.

Shocks and friction:	Not applicable
Contact with the air:	Not applicable
Heating:	Risk of ignition
Sunlight:	Avoid
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 detailed information on decomposition 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 (CO_2), carbon monoxide and other organic compounds. See section 5 of the Sheet for more information.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

There is no experimental data on toxicological effects of the product.
Contains glycols; there is possibility of health- hazardous effects, so it is recommended not to inhale its vapour for too long.

Health hazard:
In case of repeated or prolonged exposure or concentrations exceeding occupational exposure limits, side effects may occur depending on the way of exposure:

A. Ingestion (acute effects):
- Acute toxicity: Based on available data, the classification criteria are not met, but the product contains substances classified as dangerous if swallowed. See section 3 for more information.

- Caustic/Irritating: Based on available data, the classification criteria are not met, but the product contains substances classified as dangerous. See section 3 for more information3.

B. Inhalation (acute effects):
Acute toxicity: Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous if inhaled. See section 3 for more information.
- Caustic/Irritating: Based on available data, the classification criteria are not met, but the product contains substances classified as dangerous if inhaled. See section 3 for more information.

C. Contact with skin and eyes (acute effects):
- Contact with skin: Based on available data, the classification criteria are not met, but the product contains substances classified as dangerous in contact with skin. See section 3 for more information.
- Contact with eyes: Causes damages in contact with eyes.

D. CMR effects (carcinogenicity, mutagenicity and harmful effect on reproduction):
- Carcinogenicity: Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous because of the effects mentioned above. See section 3 for more information.
- May cause genetic defects: Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous. See section 3 for more information.
- May be harmful to reproduction: Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous. See section 3 for more information.

E. Allergic effects:
- Respiratory: Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous due to allergic effect. See section 3 for more information.

- Dermal: Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous. See section 3 for more information.

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

G. Aspiration hazard:
- Based on available data, the classification criteria are not met. The product does not contain substances classified as dangerous. See section 3 for more information.

Other information:
No data.

11.2. Detailed toxicological data of the substances

Acute toxicity:

Acetone

LD50 (rat, ingestion)	5800 mg/kg
LD50 (rabbit, skin)	7426 mg/kg
LC50 (rat)	76 mg/L (4h)

Dimethyl ether

LD50	>2000 mg/kg
LD50	>2000 mg/kg
LC50 (rat)	308.5 mg/L (4h)

Ethyl acetate

LD_{50} (rat, ingestion)	4100 mg/kg
LD_{50} (rabbit, skin)	20000 mg/kg
LC_{50}	>20 mg/m^3 (4h)

Butyl acetate

LD_{50} (rat, ingestion)	12789 mg/kg
LD_{50} (rabbit, skin)	14112 mg/kg
LC_{50} (rat)	23.4 mg/m^3 (4h)

2-methoxy-1-methyl ethyl acetate:

LD_{50} (rat, ingestion)	8532 mg/kg
LD_{50} (rat, skin)	5100 mg/kg
LC_{50} (rat)	30 mg/m^3 (4h)

Butan-1-ol
LD_{50} (rat, ingestion) 2292 mg/kg
LD_{50} (rabbit, skin) 3400 mg/kg
LC_{50} (rat) 24.66 mg/m^3 (4h)

Propan-2-ol
LD_{50} (rat, ingestion) 5280 mg/kg
LD_{50} (rat, skin) 12800 mg/kg
LC_{50} (rat) 72.6 mg/m^3 (4h)

SECTION 12: ECOLOGICAL INFORMATION

There is no experimental data on ecotoxicological properties of the mixture itself.

12.1. Toxicity

Acetone
Oncorhynchus mykiss (fish) / LC50 (96 h) 5540 mg/L
Daphnia magna / EC50 (48 h) 23.5 mg/L
Chlorella pyrenoidosa (alga) / EC50 (48 h) 3400 mg/L

Ethyl acetate
Pimephales promelas (fish) / LC50 (96 h) 230 mg/L
Daphnia magna / EC50 (48 h) 717 mg/L
Scenedesmus subspicatus (alga) / EC50 (48 h) 3300 mg/L

Butyl acetate
Leuciscus idus (fish) / LC50 (96 h) 62 mg/L
Daphnia magna / EC50 (24 h) 73 mg/L
Scenedesmus subspicatus (alga) (72 h) 675 mg/L

2-methoxy-1-methyl ethyl acetate
Pimephales promelas (fish) / LC50 (96 h) 161 mg/L
Daphnia sp. (crustacea) / EC50 (48 h) 481 mg/L
EC50 no data

Propan 2-ol
Pimephales promelas (fish) / LC50 (96 h) 9640 mg/L
Daphnia magna / EC50 (48 h) 13299 mg/L
Scenedesmus subspicatus (alga) (72 h) 1000 mg/L

Butan-1-ol
Pimephales promelas (fish) / LC50 (96 h) 1740 mg/L
Daphnia magna / EC50 (48 h) 1983 mg/L
Scenedesmus subspicatus (alga) (96 h) 500 mg/L

12.2. Persistence and degradability

Identification	Degradability		Biodegradability	
Acetone	BOD5	No data	Concentration	100 mg/l
	COD	No data	Time	28 days
	BOD5/ COD	0.96	% biodegradable	96%
Ethyl acetate	BOD5	1.36 g O2/g	Concentration	100 mg/l
	COD	1.69g O2/g	Time	14 days
	BOD5/ COD	0.81	% biodegradable	83%
Butyl acetate	BOD5	No data	Concentration	No data
	COD	No data	Time	5 days
	BOD5/ COD	0.79	% biodegradable	84%
2-methoxy-1-methyl ethyl acetate	BOD5	No data	Concentration	785 mg/l
	COD	No data	Time	8 days
	BOD5/ COD	No data	% biodegradable	100%
Propan-2-ol	BOD5	1.19 g O2/g	Concentration	100 mg/l
	COD	2.23 g O2/g	Time	14 days
	BOD5/ COD	0.53	% biodegradable	86%
Butan-1-ol	BOD5	1.71 g O2/g	Concentration	No data
	COD	2.46 g O2/g	Time	19 days
	BOD5/ COD	0.69	% biodegradable	98%

12.3. Bioaccumulative potential

Bioaccumulative potential:

Acetone
BCF 1
Log POW -0.24
Potential low

Ethyl acetate
BCF 30
Log POW 0.73
Potential medium

Butyl acetate
BCF 4
Log POW 1.78
Potential low

2-methoxy-1-methyl ethyl acetate
BCF 1
Log POW 0.43
Potential low

Propan-2-ol
BCF 3
Log POW 0.05
Potential low

Butan-1-ol
BCF 1
Log POW 0.88
Potential low

12.4. Mobility in soil

Identification	Absorption/desorption		Variability	
Acetone	Koc	1	Henre's constant	2.93 Pa·m³/mol
	Conclusions	Very high	Dry soil	Yes
	Surface tension	2.304E-2 N/m (25 ºC)	Wet soil	Yes
Dimethyl ether	Koc	No data	Henre's constant	No data
	Conclusions	No data	Dry soil	No data
	Surface tension	1.136E-2 N/m (25 ºC)	Wet soil	No data
Ethyl acetate	Koc	59	Henre's constant	13.58 Pa·m³/mol
	Conclusions	Very high	Dry soil	Yes
	Surface tension	2.324E-2 N/m (25 ºC)	Wet soil	Yes
Butyl acetate	Koc	No data	Henre's constant	No data
	Conclusions	No data	Dry soil	No data
	Surface tension	2.478E-2 N/m (25 ºC)	Wet soil	No data
Propan-2-ol	Koc	1.5	Henre's constant	8.207E-1 Pa·m³/mol
	Conclusions	Very high	Dry soil	Yes
	Surface tension	2.24E-2 N/m (25 ºC)	Wet soil	Yes
Butan-1-ol	Koc	2.44	Henre's constant	5.39E-2 Pa·m³/mol
	Conclusions	Very high	Dry soil	Yes
	Surface tension	2.567E-2 N/m (25 ºC)	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

13.1. Waste treatment methods

Code 08 01 11* waste paints and varnishes containing organic solvents or other dangerous substances.
Waste type (Commission Regulation (EU) No 1357/2014): dangerous.

Waste type (Commission Regulation (EU) No 1357/2014):
HP3 Flammable.
HP4 Irritating – irritating to skin and causing serious eye damage.
HP5 Toxic effect on target organs (STOT) or aspiration hazard.

Waste management (disposal and evaluation):
Hand over for disposal to a specialized company 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 OJ 2013 no 0 item 21.
According to code 15 01 (2014/955/UE), if the container is in direct contact with the product, it should be treated like the product.
Otherwise it should be treated as non – dangerous.
It is advised not to let it into waterways.
See subsection 6.2 of the Sheet.

Provisions regarding waste management:
According to Annex II to the Regulation (EC) no 1907/2006 (REACH) Community or national provisions related to waste management have been adopted.

Community provisions:
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
UN1950

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 hazard
No.

14.6. Special precautions for user

Special precautions for user:	63, 959, 190, 277, 327, 344
Tunnel restriction code:	D
Physical and chemical properties:	see section 9 of the Sheet
Limited quantity:	1 L

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

Marine transport of dangerous goods:
As required by IMDG 38-16:

14.1. UN number
UN1950

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:	63, 959, 190, 277, 327, 344
EmS codes:	F-D, S-U
Physical and chemical properties:	see section 9 of the Sheet
Limited quantity:	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:
As required by IATA/ICAO 2017:

14.1. UN number
UN1950

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 Regulation (EC) 1907/2006(REACH): No data
Substances present in Annex XIV REACH (list of permits) 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: Propan-2-ol (Group 1, 2, 4).
Regulation (EU) No 649/2012 concerning the import and export of dangerous chemicals: No data.

Restrictions on the sale and use of certain hazardous substances and mixtures (Annex XVII REACH etc.):
Regulation of the European Parliament and of the Council (EU) No 98/2013 of January 15 201 on the marketing and use of explosives precursors: contains acetone. The product complies with the provisions of Article 9.

Specific provisions for the protection of people or the environment:
It is recommended to use the information included in this Safety Data Sheet as preliminary data to estimate local hazards in order to take the necessary steps to prevent the risk concerning handling, as well as its use, storage and disposal.

Other regulations:
- 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 with later amendments.
- 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 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.
- 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.
- Council Directive of May 20 1975 on the approximation of the laws of the Member States relating to aerosol dispensers.
- Commission Directive 94/1/EC of January 6 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 April 8 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 March 19 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.
- Commission Directive (EU) 2016/2037 of November 21 2016 amending Council Directive 75/324/EEC as regards the maximum allowable pressure of aerosol dispensers and 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 (4ATP).

15.2. Chemical safety assessment
Chemical safety assessment has not been performed.

SECTION 16: OTHER INFORMATION

Regulations concerning Material Safety Data Sheet:
This sheet has been prepared in accordance with ANNEX II-Guide for persons preparing Material Safety Data Sheets – to Regulation (EC) No 1907/2006 (Regulation (EC) No 453/2010, Regulation (EU) No 2015/830).

Changes in comparison with previous material safety data sheet affecting risk management:
No data.

Phrases of the Regulation mentioned in section 2:
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H229: Pressurized container: may burst if heated.
H222: Extremely flammable aerosol.

Phrases of the Regulation mentioned in section 3:
The given phrases do not apply to the product itself; they are given for information purposes only and refer to individual components appearing in Section 3 of this Sheet.

Regulation No 1272/2008 (CLP):
Acute Tox. 4: H302 – Harmful if swallowed.
Eye Dam. 1: H318 – Causes serious eye damage.

Eye Irrit. 2: H319 – Causes eye irritation.
Flam. Gas 1: H220 – Extremely flammable gas.
Flam. Liq. 2: H225 – Highly flammable liquid and vapour.
Flam. Liq. 3: H226 – Flammable liquid and vapour.
Press. Gas: H280 – Contains pressurized gas, may burst if heated.
Skin Irrit. 2: H315 – Causes skin irritation.
STOT SE 3: H335 – May cause respiratory 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 concerning training of staff:
It is recommended for the staff working with the product to be trained at the basic level in the field of work safety to facilitate understanding and interpretation of the material safety data sheet and product label.

Main literature sources:
http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations used in the text:
Supp. 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 coefficient
Log POW: log octanol/water partition coefficient
MPC: maximum permissible concentration
MPIC: maximum permissible instantaneous concentration
EC50:effective concentration (component concentration, at which 50% of its maximal effect on organisms is observed at a given time)
LD50: median lethal dose
LC50: median lethal concentration
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 plants
Henry: solubility of a given component in the solution depending on the partial pressure of this component above the solution.
EC: EINECS and ELINCS number (see also EINECS and ELINCS)
EINECS: European Inventory of Existing Chemical Substances
ELINCS: European List of Notified Chemical Substances
CEN: European Committee for Standardization.
STOT: toxic effect on target organs
Koc: partition coefficient normalized to the organic carbon content that determines the degree of absorption of organic substances in soil
DNEL: derived no-effect level
PNEC: predicted no-effect concentration

Other data sources:
ECHA European Chemicals Agency
TOXNET Toxicology Data Network

Changes in the sheet compared to the previous version: Section 7.2 and general update.
Number of the Sheet: 070P6L2018V2