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

1.1. Product identification
Cleaning agent REMOVER SPRAY

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

Relevant identified uses:
For professional cleaning spray guns, spray booths, tools and application machines.

Uses advised against:
Do not use on surfaces other than advised.

1.3. Data of the safety data sheet supplier:

Przedsiębiorstwo RANAL Sp. z o.o.
Ul. Łódzka 3
42-240 Rudniki k. Częstochowy, PL
Phone: +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 - 03.00pm)

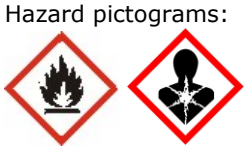
SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of substance or mixture
Classification according to Regulation (EC) No 1272/2008 of December 16 2008 on Classification, Labeling and Packaging (CLP).

H223 Flammable aerosol, hazard category 2.
H315 Causes skin irritation, hazard category 2.
H319 Serious eye damage /eye irritation, hazard category 2.
H351 Carcinogenicity, hazard category 2.

2.2. Label elements
according to Regulation EC No 1272/2008 (CLP)

Hazard pictograms:



Warning word: **Warning**.

Risk index:

H223	Flammable aerosol
H229	Pressurized container: may burst if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
Carc.2:H351	Suspected of causing cancer.

Safety index:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P410-412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Prevention precautionary statements:

P251	Do not pierce or burn, even after use.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

Contains : Dichloromethane and white spirit.

2.3. Other hazards
Components of the mixture are not included in category vPvB and PBT according to Annex XIII.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances
Not applicable.

3.2. Mixtures

Components:

Component REACH No	CAS No	EC No	% weight	Classification according to Regulation EC No 1272/2008 hazard classes /codes of categories indicating hazard type #
Dichloromethane 01-2119480404-41-0001	75-09-2	200-838-9	50 – 85	Carc. 2, H351, GHS08 Wng
White spirit low aromatic* 01-2119471306-40-xxxx	64742-89-8	265-192-2	<2	Flam. Liq. 3, Skin Irrit. 2, Asp. Tox. 1, STOT SE 3, Aquatic Chronic 3
Isopropanol 01-2119457558-25-xxxx	67-63-0	200-661-7	<2.0	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3, H319, H225, GHS02, GHS07, Dgr
i-butane 01-2119474691-32-xxxx	06-97-8	203-448-7	5-20	Flam. Gas 1, Press. Gas, H220, GHS02, GHS04, Dgr

- full text of hazards statements provided in section 16.
* - in case of this component Note P and H shall be applied:
Note P:
Classification of a substance as carcinogenic or mutagenic does not have to be applied if it can be proved that the substance contains less than 0,1 % by weight of benzene (EINECS nr 200-753-7).
Note H:
Classification and labelling of this substance shall be applied for dangerous properties marked with phrase (-s) indicating hazard type together with hazard class (-es) and category (-ies). Requirements of art. 4 concerning manufacturers, importers and further users of this substance shall be applied for all other hazard classes and categories. In case of hazard classes, in which way of exposure or type of effects require differentiation of classification in hazard class, manufacturer, importer or further user are obliged to consider not yet considered ways of exposure or effects.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures.

Poisoning by inhalation:
In case of poisoning by inhalation Remove the victim into fresh air, ensure quiet surrounding, protect from the loss of heat, and in case of no breath perform artificial respiration and ensure medical help.

Eye contamination:
In case of contact with eyes immediately rinse with plenty of pure water, not using strong water jet, with eyes wide open, for about 15 minutes and ensure medical help

Skin contamination:
In case of contamination of skin remove contaminated clothes, wash contaminated areas with plenty of water and soap. In case of irritation or blisters ensure medical help.

Poisoning by alimentary tract:
In case of swallowing rinse mouth with plenty of water administer water to drink, prevent the loss of consciousness, immediately ensure medical help and show material safety data sheet.

4.2. Most important symptoms both acute and delayed

Inhalation: irritation of upper respiratory tract, in case of high concentration and prolonged exposure – loss of consciousness or even death.

Contact with skin: irritation, and in case of prolonged exposure – dryness, dermatitis and burns; among the symptoms there are pain, redness, swelling, tissue damage.

Contact with eyes: comea irritation or damage, possible temporary vision disorder.

Swallowing: irritation, nausea, vomiting, diarrhea, which may lead to dehydration and loss of consciousness.

4.3. Indications of any immediate medical attention and special treatment needed
Ensure proper ventilation and oxygenation. There is no specific cure. Supportive therapy based on doctor’s assessment.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Foam forming, water spray, extinguishing powders, carbon dioxide.

5.2. Special hazards arising from the substance or mixture
As a result of exposure to heat pressure in containers gets higher and they may burst, so it is necessary to cool them by spraying water from safe distance. In case of bursting the following substances are generated: carbon monoxide, carbon dioxide, hydrochloric acid, phosgene, various hydrocarbons and nitrogen compounds.

5.3. Advice for firefighters.
Remove people not being part of fire extinguishing team, use an apparatus isolating upper respiratory tract. Cool the containers with water spray as there is a risk of explosion. Prevent leakage of the product to the sewage system. Do not get close to spilled substance with fire. Mixtures containing methyl chloride and flammable thinners pose a risk of ignition after evaporation of methylene chloride.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency measures
Use personal protective measures and do not come close with open flames. Do not inhale vapour. Avoid contact with skin and eyes. Ensure proper ventilation. It is recommended not to take any actions, which may pose any risk for people if not adequately trained. Do not allow unnecessary and unprotected personnel enter the area.

6.2. Environmental precautions
Prevent spreading into ditches or leakage to the sewage system, using special barriers.

6.3. Methods and materials for containment and cleaning up.
Localize the leakage if possible, isolate remaining sealed containers, place damaged containers into emergency container, absorb the liquid with sand or earth. Collect into closed container. Rinse contaminated surface with water. Collect the residues and dispose of as dangerous waste.

6.4. Reference to other sections.
Personal protection measures – see section 8 of the Material Safety Data Sheet.
Disposal considerations – see section 13 of the Material Safety Data Sheet.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe handling.
Avoid contact with eyes, do not inhale vapour and spray, avoid sparkles and open flames, use only in well ventilated rooms. Do not eat, drink or smoke when working with the product. Wash hands after the end of works and before each break.

7.2. Conditions for safe storage, including any incompatibilities.
Store in closed original containers, in well ventilated rooms, in a warehouse of flammable liquids, with storing temperature 5-20^{o}C, away from direct sunlight and other sources of heat and ignition. Do not smoke in storage areas; avoid contact with strong oxidants, peroxides, aluminium, alkali metal and copper.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION MEASURES

8.1. Control parameters

Maximum permissible concentrations of the substance in work environment.

Component	CAS No	MPC value	MPIC value	Unit
Dichloromethane	75-09-2	88	Not specified	mg/m^3
White spirit	64742-89-8	300	900	mg/m^3
Isopropanol	67-63-0	900	1200	mg/m^3
Isobutane	106-97-8	1900	1200	mg/m^3

8.2. Exposure control

Respiratory tract:
In case of insufficient ventilation use respiratory protection with gas filter.

Hands:
Use protective gloves. Material of gloves should be impermeable and resistant to the product. Product includes several components so gloves' resistance cannot be calculated in advance and they should be tested before use.

Eyes and face:
Use tight protective glasses – goggles or face protection.

Skin:
Use protective clothes (working apron, overalls).

General recommendations:
Places allowing eyes and body washing should be available in the place of work (safety showers eyes rinsing fountains). Ensure efficient ventilation of the rooms. Choice of safety equipment depends on exposure level. Do not eat, drink or smoke when handling the product. Wash hands before work brakes and at the end of work.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Content:	
Appearance	quick evaporating paste
Odour	characteristic
Boiling temperature	124-140°C
pH	not applicable
Flammability	see classification in section 2
Vapour pressure	4 bar (at 20°C)
Explosion limit	
Top:	18.6 % vol.
Bottom:	2.6 % vol.
Density	0.84-0.94 g/cm^3
Solubility in:	
water	not soluble
organic solvents	soluble

9.2. Other informtion
Not applicable.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Dangerous reactions unknown under normal conditions of use.

10.2. Chemical stability.
Product stabile under advised conditions of use and storage.

10.3. Possibility of hazardous reactions.
No hazardous reactions if the product is stored as recommended.

10.4. Conditions to be avoided.
Avoid open fire or other sources of high temperatures, protect from direct sunlight.

10.5. Incompatible materials.
Avoid contact with strong oxidants, peroxides, aluminium , alkali metals and copper.

10.6. Hazardous decomposition products.
Phosgene, hydrogen chloride, chlorine.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
No data regarding the product. Evaluation based on the components of the mixture.

Dichloromethane CAS 75-09-2

LD50	(rat ingestion)	1600 mg/kg,
LC	(rat, ingestion)	86 mg/m^3/4h
LD50	(rat after application on skin)	over 2000 mg/kg

Butane CAS 106-97-8
LC50 (rat) 658 mg/m^3/4h

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Toxicity for aquatic organisms due to the content of dichloromethane:

Acute toxicity for fish	LC50	310 mg/l
Acute toxicity for daphnia	EC50	480 mg/l
Growth arresting concentration for green algae	IC50	>662 mg/72h
Product is not harmful for aquatic organisms	LC50/EC50/IC50	over 100

12.2. Persistence and degradability
Biodegradation due to the content of dichloromethane 665% (50 h)

12.3. Bioaccumulative potential
Unknown.

12.4. Mobility in soil
Unknown.

12.5. Results of PBT and vPvB assesment
Not classified as PBT and vPvB.

12.6. Other hazardous effects
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods.

Do not dispose together with communal waste; do not dispose into sewage system. After evaporation in a well ventilated area pass the containers to a specialized entity authorized to collection, recover o disposal of dangerous waste.
Used aerosol containers may contain residues of gas (butane) and pose a threat of explosion. Do not pierce or flatten in uncontrolled conditions.
Content: type; 16 05 05 gases in pressure containers other than those mentioned in 16 05 04*.

SECTION 14. TRANSPORT INFORMATION

	Road/rail transport (RID/ADR)	**Marine transport (IMDG/IMO)**	**Air transport (ICAO/IATA)**
14.1. UN number	1950	1950	1950
14.2. Proper shipping name	AEROSOLS flammable	AEROSOLS flammable	AEROSOLS flammable
14.3. Transport hazard class (es)	Class: 2 gases Classification code: 5F	Class: 2 gases	Class: 2 gases
14.4. Packaging group	Not applicable		
14.5. Environmental hazards	Warning label: no 2.1	Label: 2.1	Label: 2.1
14.6. Special precautions for user	Limited quantities: LQ2 Transport category: 2 Tunnels: D	No data.	No data.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 Convention and the IBC Code	No data.	No data.	No data.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations / legislations specific for the substance or mixture
- Commission Regulation EU No 453/2010 of May 20 2010 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 (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.

- Regulation of the European Parliament and of the Council (EC) No 1272/2008 of December 16 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
- Regulation (EC) No 273/2004 of the European Parliament and of the Council of February 11 2004 on drug precursors.
- Council Regulation (EC) No 111/2005 of December 22 2004 laying down rules for the monitoring of trade between the Community and third countries in drug precursors.
- Regulation (EC) No 648/2004 of the European Parliament and of the Council of March 31 2004 on detergents.
- Commission Regulation (EC) No 907/2006 of June 20 2006 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes III and VII thereto.
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SECTION 16. OTHER INFORMATION

H and P phrases:

H351	Suspected of causing cancer.
H319	Causes serious eye irritation, cat. 2.
H315	Causes skin irritation, cat. 2.
H220	Extremely flammable gas.
H304	May be fatal if swallowed and enters airways.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long-lasting effects.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P410-412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P251	do not pierce or burn even after use.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

Explanations of the abbreviations and acronyms used in the Material Safety Data Sheet:

Carc. Cat. 3	carcinogenicity, hazard category 3.
Flam. Gas	Flammable gas.
Flam. Liq.	Flammable liquid.
Press. Gas	Pressurized gas.
STOT SE	toxic effect on target organs – single exposure.
Eye Irrit.	eye irritation.
Asp. Tox.	aspiration hazard.
vPvB	very persistent and very bioaccumulative.
PBT	persistent, bioaccumulative and toxic.
PBT	persistency, bioaccumulation and toxicity.
vPvB	very persistent and very bioaccumulative.
CAS	Chemical Abstracts Service.
EC	a number ascribed to a chemical substance in the European List of Notified Chemical Substances (ELINCS), or a number in the European Inventory of Existing Chemical Substances (EINECS), or number in the list the chemical substances mentioned in the publication "No-longer polymers".
MPIC	maximum permissible instantaneous concentration in a workplace.
PCB	permissible concentration in biological material.
DNEL	Derived No Effect Level.
PNEC	Predicted No Effect Concentration.
BEL	bottom explosion limit.
TEL	top explosion limit.
LD50	dose causing 50% death.
LC50	concentrationn causing 50% death.
EC50	concentration causing 50% life reaction.
UN number	material identification number (UN number).
ADR	European agreement for international transport of dangerous goods by road.

This material safety data sheet was based on information provided by suppliers of base raw materials (material safety data sheets).
This product should be used according to the rules of industrial good practice and official regulations.
Information included in this safety data sheet results from our current knowledge and it describes the product from the point of view of safety rules. It does not constitute warranty of product characteristics and cannot be used as base for complaint. The use of given information, as well as use of the product remain out of producer's control, so it is user's obligation to create safe conditions for handling the product.
Preparation submitted to inspector for chemical substances and preparation.
Material Safety data Sheet available on demand of professional user.

Changes compared to the previous version:
Updating: 1.3, 15.1, 16.0 and general update.

Trainings:
Persons participating in the trade with dangerous preparations should be trained in proceedings, safety and hygiene. Drivers of vehicles should receive training and obtain a relevant certificate in accordance with the requirements of ADR regulations.

Number of the Sheet: 071P8L2018V3