CHEMISTRY FOR ELECTRONICS

HAZARDOUS PREPARATION MATERIAL SAFETY DATA SHEET INFORMATION CARD PLASTIC CLEANER

Version 1.04

Update date: 16.01.2019

Date of card preparation: 12.02.2018

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND PRODUCER, DISTRIBUTOR

TRADE NAME PRODUCT APPLICATIONS DISTRIBUTOR

PLASTIC CLEANER

Foam for cleaning any plastic surface in an aerosol container

PLATINET S.A.

30-798 Kraków, ul. Tadeusza Śliwiaka 48

Phone +48 (012) 6510 580 E-mail: export@platinet.pl

2. COMPOSITION AND INFORMATION ON COMPONENTS

Substances	CAS no.	EU No. Concentr		Classification		
		Index no.	ation (%			
Isopropyl	67-63-0	200-661-7	<15	F; R11		
alcohol		603-117-00-0		Xi; R36		
				R67		
Alkylbenzene-	25155-30-0	246-680-4	< 0.5	Xi; R36/38		
sodium				(manufacturer's		
Drivosol 35 B	mixture	203-448-7	13-15	F+; R12		
	n-Butane	601-004-00-0		(producer classification)		
	106-97-8	200-827-9				
	Propane	601-003-00-5				
	74-98-6					

List of symbols designating hazard category and R-Phrases that have been presented in item 2 of the information card and their complete wording have been included in item 16 of this information card. R phrases refer to mixture components, and not to the whole preparation.

3. HAZARD IDENTIFICATION

Extremely inflammable. Vapours may induce feeling of drowsiness and dizziness.

Pressurized container: protect against sunlight and temperatures over 50 °C. Do not pierce or burn, also after consumption. Do not spray over open flame or glowing material. Protect against sources of ignition – do no smoke while spraying. Keep away from children.

4. FIRST AID

RESPIRATORY TRACT

Take the sufferer outdoor. In the event of no immediate improvement, provide medical care.

Plastic cleaning foam (Plastic Cleaner) SKIN CONTACT

Rinse contaminated skin with plenty of water. If skin irritation persists, provide medical care.

CONTACT WITH EYES

Rinse eyes with plenty of water for about 15 min., consult a doctor.

INGESTION

Drink plenty of water, do not cause vomiting, consult a doctor.

5. PROCEDURES IN CASE OF FIRE

APPROPRIATE FIRE EXTINGUISHING MEANS

Water - dispersed water currents, foam resistant to alcohol, carbon dioxide, fire extinguishing powders.

EXTINGUISHING AGENTS WHICH CANNOT BE USED FOR SAFETY REASONS

Do not apply jet water streams.

SPECIFIC HAZARDS

Extremely flammable liquid. Water may be an ineffective extinguishing agent. Should be used to cool down containers with agent to prevent explosion. Vapours can move along the ground to ignition sources and cause backward flame line. Cool down tanks exposed to fire or high temperatures with water from a safe distance; if possible, remove them from the hazard zone (threat of explosion).

HAZARDOUS DECOMPOSITION PRODUCTS

As a result of burning carbon oxides may be generated (CO, CO2).

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Substances harmful for health may be generated during fire. Wear gas-tight protective clothing and an apparatus isolating the respiratory tract (oxygen apparatus complete with a mask).

OTHER INFORMATION

Do not permit penetration of extinguishing agents to drains and watercourses. Notify the environment of the fire. Remove from the hazard area all persons not participating in fighting the fire. Notify the State Fire Departament, and, if necessary, also the State Police, the nearest local authorities and the nearest Chemical Rescue unit.

6. PROCEDURES IN CASE OF UNINTENDED RELEASE TO THE ENVIRONMENT

INDIVIDUAL PRECAUTIONS

Provide appropriate means of personal protection (protective clothes, glasses and gloves).

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PRECAUTIONS IN THE FIELD OF ENVIRONMENTAL PROTECTION

In the event of failure do not allow dump to the environment. Protect the product against penetrating to sewers, surface and ground waters and to the soil. Try to collect as much as possible, to appropriate containers for further disposal.

CLEANING METHODS

The product is in hermetically closed aerosol containers - spill is hardly likely. In the event of container damage, remove any sources of fire from the environment and ensure good ventilation. Collect leakage by means of inert absorbents e.g. sand. Place in an appropriate container and forward for disposal.

7. PREPARATION HANDLING AND STORAGE

PREPARATION HANDLING

Avoid contact with eyes and skin. Use away from sources of fire or incandescent materials.

PROTECTION AGAINST FIRE AND EXPLOSION

Do not spray over open flame or glowing material. Keep away from all sources of heat and fire. Liquid and vapours are extremely flammable.

STORAGE

Keep in a well ventilated, cool location. Keep away from children. Protect against sunlight and temperatures over 50°C.

Professional application: keep in a well ventilated place, meeting binding regulations with regard to safety and fire protection - fireproof warehouse, without heating, electrical installation and anti-explosion ventilation, floor with electricity-conducting lining; metal machines and equipment of warehouses, tanks, packaging etc., where electrical charges may accumulate, should be earthed. Keep away from children. Protect against sunlight and temperatures over 50°C.

OTHER INFORMATION

Always keep in original packaging. Do not use contaminated, empty packaging for other purposes.

8. EXPOSURE CONTROL AND MEANS OF PERSONAL PROTECTION

ADDITIONAL INSTRUCTIONS WITH REGARD TO REQUIREMENTS FOR TECHNICAL DEVICES

Use in well ventilated rooms.

For professional use: effective local exhaust ventilation in the room and general ventilation in the room are necessary to reduce the degree of employee exposure. Work environment shall be monitored to ensure proper ventilation. If the exhaust ventilation is insufficient, use suitable personal respiratory protection.

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HAZARDOUS SUBSTANCES, HIGHEST ACCEPTABLE CONCENTRATIONS THAT SHOULD BE CONTROLLED

2									
Substance name	CAS no.	N	DS	NDSCh	NDSP				
1. Propan-2-ol *	67-63-0	900 mg/m ³ 1200 mg/m ³ not determined							
2.	Propane	74-98-6	1800	mg/m ³ not dete	rmined not				
determined									
3. Butane 106-97-8		1900 mg/m ³ 3000 mg/m ³ not determined * Pregnant							
women or nursing women are not allowed to work in exposure to the action of organic solvents, if their									
concentrations in the work environment exceed 1/3 of the highest permitted concentrations.									
Juveniles are not allowed to work in exposure to the action of chemical substances and preparations,									
which have been assigned the following hazard phrase: extremely inflammable product (R12).									

ADDITIONAL INSTRUCTIONS

Regulation of the Minister of Labour and Social Policy (Journal of Laws no. 217/2002, item 1833, adjustments Journal of Laws no. 212/2005, item 1769);

Regulation of the Council of Ministers (Journal of Laws no. 200/2004, item 2047); Regulation of the Council of Ministers (Journal of Laws no. 114, item 545) along with later amendments.

DETERMINATION IN < THE AIR AT WORKPLACE

Regulation of the Minister of Health (Journal of Laws no. 73/2005, item 645).

PN-EN 1540:2004 Air at workplace - Terminology; PN-Z-04008-7:2002 Air purity protection. Measurements of concentrations of chemical substances and industrial dusts in the air of the work environment. Principles of sampling air in the work environment and interpretation of results; PN-Z-04008-7:2002/Azl: 2004 Amendment to standard Air purity protection. Measurements of concentrations of chemical substances and industrial dusts in the air of the work environment. Principles of collecting air samples in the work environment and interpretation of results.

Propan-2-ol: PN-92/Z-04224/02; Butane: PN-Z-04252-l:1997; Propane: PN-Z-04252-l:1997;

BIOLOGICAL MONITORING

not determined.

PROTECTION OF THE RESPIRATORY SYSTEM

Avoid inhalation of vapours, sprayed fluid. When the concentration of substance is determined and known, personal protection equipment should be selected taking account of the concentration of substances occurring at the given workplace, exposure time, activities performed by the employee and recommendations stated by the manufacturer of personal protection equipment. In emergency situations organic vapour absorber complete with a mask or half-mask

EYE PROTECTION

Avoid contact with eyes. With handling the product, when there is a possibility of exposure, wear non-steaming goggles.

SKIN PROTECTION

Avoid contact with skin. Wear protective gloves made from nitrile, butyl rubber or polyvinyl alcohol. In emergency situations, wear suitable protective clothing made of coated materials.

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ENVIRONMENT MONITORING

The acceptable level of substances in the air - Regulation of the Minister of the Environment (Journal of Laws no. 872002, item 796): have been determined.

Reference values for some substances in the air - Regulation of the Minister of the Environment (Journal of Laws no. 1/2003, item 12): Aliphatic hydrocarbons - to C12: $3000 \mid Ig/m^3$ (calendar year)

Highest acceptable pollutant values for cleaned industrial sewage - Regulation of the Minister of the Environment (Journal of Laws no. 168/2004, item 1763): pH: 6.5-9

Acceptable pollution values in industrial sewage introduced to sewerage devices - Regulation of the Minister of Infrastructure (Journal of Laws no. 129/2002, item 1108): pH: 6.5-9.5

OTHER INFORMATION

Always wash hands after handling the product and before eating. When using the product, do not consume meals and beverages, do not smoke tobacco.

Any means of personal protection used must be consistent with the Regulation of the Minister of Economy,

Labour and Social Policy of 31 March 2003 on the requirements for means of personal protection (Journal of Laws no. 80/2003, item 725).

The employer is obliged to ensure that any used means of personal protection and clothing and working shoes have protective and utility properties as well as provide appropriate washing, maintenance, repair and disinfection of these items.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid, colourless in the form of aerosol

Smell: characteristic of raw materials and the used composition

of fragrances

pH: 8-12

Boiling point: non applicable Melting point: not fixed Flash point not fixed Self-ignition temperature: not fixed Limits of explosivity: non applicable Steam pressure: not fixed Specific gravity: not fixed Density: not fixed Vapour density: not fixed Solubility in water: very good Vaporization velocity: not fixed Volatile compounds: non applicable Viscosity: not fixed

10. STABILITY AND REACTIVITY

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STABILITY

Stable, when keeping appropriate conditions of storage and use. No occurrence of dangerous polymerization is anticipated.

MATERIAL AND CONDITIONS TO BE AVOIDED

High temperature, sources of sparkling and open fire. Avoid contact with strong oxidants and strong acids.

DANGEROUS DISINTEGRATION PRODUCTS

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

INHALATION EXPOSURE

For hazardous components:

PROPAN-2-OL, LC50 (rat, inhalation) - no data

PROPANE, smell sensibility threshold: 9022-36088 mg/m³

BUTANE, smell sensibility threshold - 6240 mg/m³, LC50 (rat, inhalation) - 658000 mg/m³ (4 h)

May cause irritation to mucous membranes of the upper respiratory system. Vapours may induce feeling of drowsiness and dizziness.

SKIN CONTACT

For hazardous components of the preparation:

PROPAN-2-OL, LD₅₀ (rabbit, skin) = 12800 mg/kg - beyond classification

May cause irritation. Prolonged or recurring contact with the product leads to degreasing of skin and may induce damage.

CONTACT WITH EYES

May cause eye irritation causing redness.

INGESTION

For hazardous components of the preparation:

PROPAN-2-OL, LD₅₀ (rat, orally) = 5045 mg/kg

Unlikely exposure through this way, with correct preparation handling.

OTHER INFORMATION

None of the components of the product is classified as carcinogenic, mutagenous or having a harmful effect on reproduction capacity in accordance with the provisions of the Act of 11 January 2001 on chemical substances and preparations (Journal of Laws no. 11/2001, item 84 with later adjustments) and is not on the list of carcinogens or mutagenic substances attached as Appendix to the Regulation of the Minister of Health of 1 December 2004 on substances, preparations, factors or technological processes having carcinogenic or mutagenic effect in the work environment (Journal of Laws no. 280/2004, item 2771).

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12. ECOLOGICAL INFORMATION

PROPAN-2-OL

Acute toxicity (LCso/96 h) for fish *Pimephales promelas* - 9640 mg/l Limit toxic concentration for:

- fish Leuciscus idus melanotus 7020 mg/l (LCo/48 h)
- shellfish *Daphnia magna* 5102 mg/l (ECo/24 h)
- bacteria Pseudomonas putida 1050 mg/l
- alga: Scenedesmus quadricauda 1800 mg/l, Microcystis aeruginosa 1000 mg/l
- protozoans: *Entosiphon sulcatum -* 4930 mg/l, *Uronema parduczi -* 3425 mg/l Lethal concentration for:
- fish Leuciscus idus melanotus 8970 mg/l (LCso/48 h), 9750 mg/l (LCioo/48 h)
- shellfish *Daphnia magna* 9714 mg/l (50/24 h),> 10000 Mg/l (ECW24 h) **SUMMARY**

Not subject to being classified as dangerous for the environment.

13. WASTE HANDLING

WORN PRODUCT

Does not dispose of to drains. Do not allow contamination of surface and ground waters. Do not dispose of together with municipal waste. Combust waste in an incinerating plant of hazardous waste in the presence of easily flammable materials. Do not puncture containers and do not burn in municipal incinerating plants. Dispose of empty containers in a waste dump. Collected waste liquidation manner to be agreed with the Department of Environmental Protection of the Provincial Office or County Office. Dispose of as hazardous waste, code: 16 05 04 (Regulation of the Minister of the Environment, Journal of Laws no. 112/2001, item 1206).

CONTAMINATED PACKAGING

Empty one-off packaging to be forwarded to the authorised waste recipient. Packaging code: 15 01 11 (Regulation of the Minister of the Environment, DzU.Ol.112. 1206).

14. INFORMATION ABOUT TRANSPORT

Material distinctive identification number: UN 1950

Transport name: AEROSOLS, flammable

Class: 2

Classification code: 5F Packaging group: -

Packaging instructions: P204

Hazard distinctive identification number: -

Labelling of pieces of shipment: UN 1950, AEROSOLS, flammable

Warning label no. 2.1.

Sea transport (IMDG/ADNR) Class: 2.1 EmS: F-D, S-U

Packaging group: - Air transport

(IATA): Class 2.1, packaging group: - passenger carriages: 75 kg, packing

instructions: 203 cargo: 150 kg, packing instructions: 203

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15. INFORMATION REGARDING LEGAL REGULATIONS

The product is subject to obligatory labelling.

Labelling of packaging with the capacity of 300 cm³ or 400 cm³ Identification

Contains propane, butane, propan-2-ol.

Warning sign



F + - extremely inflammable

Phrases indicating type of hazard (R phrases)

R67 - Vapours may induce feeling of drowsiness and dizziness

Phrases determining conditions of safe use of preparation (S phrases)

S2 - Keep away from children

S9 - Keep vessel in a well ventilated room

S16 - Do not keep close to sources of ignition – do no smoke tobacco

S23 – Do no inhale sprayed fluid

S46- In the event of swallowing, immediately seek medical advice – show packaging or label

OTHER INFORMATION

Pressurized container: protect against sunlight and temperatures over 50 °C. Do not pierce or burn, also after consumption.

Do not spray over open flame or glowing material. Protect against sources of ignition – do no smoke while spraying. Keep away from children.

Regulations of the European Community

Directive of the European Union 67/548/EEC with later amendments together with 29 amendment (2004/73/EC).

National legislation

Act of 11 January 2001 on chemical substances and preparations (Journal of Laws no. 11/2001, item 84 with adjustments); Regulation of the Minister Health of 28 September 2005 on the list of hazardous substances along with their classification and marking (Journal of Laws no. 201/2005, item 1674); Regulation of the Minister Health of 3 July 2002 on the information card for a hazardous substance and a hazardous preparation (Journal of Laws no. 140/2002, item 1171); Regulation of the Minister Health of 14 December 2004 changing by the Regulation on the information card for a hazardous substance and a hazardous preparation (Journal of Laws no. 2/2005, item 8); Regulation of the Minister Health of 2 September 2003 on the criteria and the method of classification of chemical substances and preparations (Journal of Laws No. 171/2003, item 1666, adjustments Journal of Laws no. 243/2004, item 2440); Regulation of the Minister Health of 2 September 2003

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on labelling packaging of hazardous substances and hazardous preparations (Journal of Laws No. 173/2003, item 1679, adjustments Journal of Laws no. 260/2004, item 2595); Regulation of the Minister Health of 14 August 2002 on the obligatory delivery of the information card for some preparations non-classified as hazardous (Journal of Laws no. 142/2002, item 1194); Regulation of the Minister of Labour and Social Policy of 29 November 2002 on the highest permitted concentrations and intensities of substances harmful for health in the work environment (Journal of Laws no. 217/2002, item 1833); Regulation of the Minister Health of 20 April 2005 on tests and measurements of factors harmful for health in the work environment (Journal of Laws no. 73/2005, item 645); Regulation of the Minister Health of 1 December 2004 on substances, preparations, factors or technological processes having carcinogenic or mutagenic effect in the work environment (Journal of Laws no. 280/2004, item 2771); Regulation of the Council of Ministers of 24 August 2004 on the list of works forbidden to juveniles and the conditions of employing them in some of such works (Journal of Laws No. 200/2004, item 2047); Regulation of the Council of Ministers of 10 September 1996 on works particularly burdensome or harmful for health of women (Journal of Laws no. /114 1996, item 545 with adjustments); Regulation of the Minister of Health and Social Care of 30 May 1996 on medical examination of employees, scope of prophylactic health care over employees and medical certificates issued for the purposes stipulated in the Labour Code (Journal of Laws no. 69/1996, item 332 with adjustments); Act of 28 October 2002 on road transport of hazardous goods (Journal of Laws no. 199/2002, item 1671 with adjustments); Act of 31 March 2004 on railway transportation of hazardous goods (Journal of Laws no. 97/2004, item 962); Act of 27 April 2001 on waste (Journal of Laws no. 62/2001, item 628 with adjustments); Regulation of the Minister of the Environment of 27 September 2001 on the list of waste (Journal of Laws no.112/2001, item 1206 with adjustments); Act of 11 May 2001 on packaging and packaging waste (Journal of Laws no. 63/2001, item 638 with adjustments); Regulation of the Minister of the Environment of 8 July 2004 on conditions that must be met when disposing of sewage to the waters or to soil and on substances of particular adverse impact on the water environment (Journal of Laws no. 168/2004, item 1763); Regulation of the Minister of Infrastructure of 20 July 2002 on the method of implementation of the obligations of industrial sewage suppliers and conditions of draining sewage into sewerage devices (Journal of Laws no. 129/2002, item 1108 with adjustments); Regulation of the Minister of the Environment of 6 June 2002 on acceptable levels of some substances in the air, alert levels of some substances in the air and tolerance margins for acceptable levels of some substances (Journal of Laws no. 87/2002, item 796); Regulation of the Minister of the Environment of 5 December 2002 on reference value for some substances in the air (Journal of Laws no. 1/2003, item 12); Regulation of the Minister of Economy and Labour of 5 July 2004 on constraints, prohibitions or conditions of production, trade or use of hazardous substances and hazardous preparations and products containing them (Journal of Laws no. 168/2004, item 1762, adjustments Journal of Laws no. 39/2005, item 372).

16. OTHER INFORMATION

All data are based on the current state of our knowledge. The card has been prepared on the basis of the information card for and the data obtained from the manufacturer. Recipients of our product must observe binding legislation and other regulations. Other sources of basic data used for preparation of the information card:

- Computer Database RTECS /Registry of Toxic Effects of Chemical Substances/, prepared by National Institute for Occupational Safety and Health, 2005.
- Computer Database Hazardous Substances Information Card, prepared by the National Institute of Labour Protection State Research Institute, 2005.
- "Harmful factors in the work environment acceptable values" issue National Institute of Labour Protection State Research Institute, 2005.
- Computer Database EINECS, 2005.

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HAZARDOUS PREPARATION MATERIAL SAFETY DATA SHEET INFORMATION CARD

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List of symbols and R-Phrases that have been included in item 2 of the information card: F+ - extremely inflammable product; F - highly inflammable product; Xi - irritating product; R12 - extremely inflammable product; R11 - highly inflammable product; R36 - Has an irritating effect on eyes; R36/38 - Has an irritating effect on eyes and skin; R67 - Vapours may induce feeling of drowsiness and vertigo

Basis for classification:

- 1. On the basis of the manufacturer's information the preparation is subject to being classified as extremely inflammable F+, with assigned phrase R12. It is necessary to perform tests of physical and chemical properties of the preparation with methods set out in the regulations published on the basis of Article. 24 passage 2 item 1 of the Act on chemical substances and preparations. In the case of phrases determining hazards resulting from physical and chemical properties of the preparation, phrase R repeating verbal identification of warning sign meaning shall be put on packaging labels.
- 2. The product contains substances that may induce symptoms of suppressing the central nervous system, thus phrase R67 has been assigned.
- 3. The product does not is subject to classification Xi; R36 in accordance with the criteria of classification and limit concentration and content of isopropyl alcohol in the preparation <15% (Xi;<1 R36: C > 20%, Xi; R36 obligatorily).
- 4. On the basis of limit concentrations of the manufacturer's classification of sodium alkylbenzosulfonate Xi, R36/38 and the actual component concentration in the preparation (<0.5%), the preparation is not subject to classification Xi, R36/38 (C > 20%, Xi;<0 R36/38 obligatorily).
- 5. Classification of the preparation has been made with the calculation method: F+; R12-67.
- 6. Phrases S2 and S46 apply, because the preparation is intended for sale to consumers.

Information to the Inspector for Substances and Chemical Preparations:

Information to the Inspector for Substances and Chemical Preparations on introducing the preparation to trade on the territory of the Republic of Poland of the preparation is required in accordance with the requirements of the provisions of Article 23 of the Act of 11 January 2001 on chemical substances and preparations (Journal of Laws no. 11/2001, item 84 with later amendments), because the preparation is classified as hazardous.