MATERIAL SAFETY DATA SHEET

prepared in accordance with Commission Regulation (EU) No 830/2015 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 on registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

(EU Official Journal of the European Union series L no. 133 of 31 May 2010)

SECTION 1: IDENTIFICATION OF THE MIXTURE AND IDENTIFICATION ENTERPRISES

1.1 Product ID

TOPNIK RF800 1.2

Relevant identified uses of the mixture and uses advised against

Identified uses: auxiliary preparation for soldering electronic components
Uses advised against: other than the above

1.3 Details of the supplier of the safety data sheet

Supplier:

Micro Chip Electronic Barbara Kaczmarczyk ul.
Kochanowskiego 9
40-035 Katowice
Phone +48 32 251 36 90

E-mail of the person responsible for the safety data sheet: biuro@micro-chip.pl

1.4 Emergency telephone number

Emergency number in Poland (open 9:00-16:00): + 48 32 251 36 90

Date of preparation: 23/10/2012
Update date: 14/04/2017

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the mixture

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

General hazards:
Highly flammable substance

Health Hazards: May
cause an allergic skin reaction. H317
Eye irritation, cat.2, H319;
Specific target organ toxicity – single exposure STOT single exposure, cat. 3, H336

Hazardous properties:
Flammable liquid, cat. 2, H225;

Environmental hazard: not
applicable

2.2 Labeling elements

Pictograms:

Signal Word: **Danger**

Hazard statements:

H225 – Highly flammable liquid and vapour.
H317 – May cause an allergic skin reaction.
H319 – Causes serious eye irritation
H336 – May cause drowsiness or dizziness.

Precautionary statements:

P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P303+P361+P353 - If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. continue rinsing.
P304+P340 - If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Additional labeling requirements:

Lack

In case of use by consumers, additionally:

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

2.3 Other threats

May form explosive mixtures with air.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixture

Ingredients of the mixture:

Name of the substance	index number	CAS No.	EC No.	ul. mass in %	Classification according to Regulation (EC) No 1272/2008	
					Hazard classes and Category Codes	Return codes indicating type threats
Propan-2-ol; isopropyl alcohol Registration number: 01-2119457558-25-0000	603-117-00-0	67-63-0	200-661-7	80-100	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336

hydrotreated light distillates (petroleum) Registration number: 01-2119484819-18		64742-47-8	265-149-8	< 5	Asp. Tox. 1;	H304
Succinic acid		110-15-6	203-740-4	< 5		
rosin		8050-09-7	232-475-7	< 1	Skin Sens. 1;	H317

The full text of H phrases and the acronyms of symbols, hazard classes and category codes are given in Section 16 of the Safety Data Sheet.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: Remove the injured person from the place of exposure, place them in a comfortable half-sitting or sitting position, ensure calmness, protect against heat loss. If breathing problems occur, apply artificial respiration. If symptoms persist, call a doctor.

Skin contact: Rinse immediately with plenty of water, remove contaminated clothing, wash skin with plenty of soap and water. If necessary, consult a doctor.

Eye contact: Rinse immediately with plenty of lukewarm water, preferably running water, for at least 15 minutes. Remove contact lenses. Avoid strong water jets due to the risk of mechanical damage to the cornea. If irritation persists, consult an ophthalmologist.

Digestive tract: If swallowed, do not induce vomiting as there is a risk of aspiration and entry of the product into the lungs. Seek immediate medical attention.

4.2 Most important acute and delayed symptoms and effects of exposure

Inhalation of vapors may cause tiredness, weakness, drowsiness, nausea, headaches, dizziness, cough, and labored breathing.

4.3 Indications of any immediate medical attention and special treatment for the injured person

Treat symptomatically. For specialist advice, physicians should contact the Poisons Information Centre.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Alcohol-resistant or film-forming foams, carbon dioxide, extinguishing powders, water – dispersed currents.

Inappropriate extinguishing media:

Do not use dense streams of water on the surface of the liquid.

5.2 Special hazards associated with the mixture

In a fire environment, they emit fumes containing carbon monoxide. The fumes are heavier than air, remain just above the ground and can be ignited from a distance.

5.3 Information for the fire brigade

Easily flammable liquid. Vapours are heavier than air and accumulate near the ground and in lower parts of rooms. Cool containers exposed to fire from a safe distance with a sprayed water jet (explosion hazard); if possible, remove them from the endangered area. Gas-tight clothing in an antistatic version, insulating respiratory protective equipment.

SECTION 6: MEASURES IN THE EVENT OF ACCIDENTAL ENVIRONMENTAL RELEASES

6.1 Personal precautions, protective equipment and emergency procedures Wear protective gloves (e.g. nitrile), tight safety glasses. Avoid direct contact with the released substance. Do not inhale vapors. Provide adequate ventilation.

6.2 Environmental precautions

Prevent entry into sewers, surface and ground waters and soil.

6.3 Methods and materials for containment and cleaning up

For small spills, absorb or contain liquid with sand, earth or containment material. Shovel and place in a labeled container for safe disposal. Place leaking containers in a labeled drum. Wash contaminated area with large volumes of water. Retain rinsings as contaminated waste. For large spills, transfer to a labeled container for product recovery or disposal. Treat residue as minor contamination.

6.4 References to other sections

Dispose of in accordance with the recommendations in section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Ensure adequate general and local ventilation. Keep away from sources of high temperature and sources of ignition. It is advisable to take precautions to avoid contact with skin and eyes when working with the mixture. Do not inhale vapours. Prevent from entering sewage system, surface and ground water and soil. Do not eat, drink or smoke during use. Wash hands during breaks and after finishing work. Remove contaminated clothing immediately, wash before re-wearing.

7.2 Conditions for safe storage, including any information mutual incompatibilities

Store in original, properly labeled, tightly closed containers in a cool, dry, well-ventilated storage area. Store away from sources of high temperature, sources of ignition. Protect from sunlight.

7.3 Specific end use(s)

No information on uses other than those mentioned in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Data for isopropanol
DNEL value for workers under conditions of long-term exposure through the skin: 888 mg/kg/day
DNEL value for workers in conditions of long-term exposure by inhalation: 500 mg/m3
DNEL value for consumers under conditions of long-term dermal exposure: 319 mg/kg/day
DNEL value for consumers under conditions of long-term exposure by inhalation: 89 mg/m3
DNEL value for consumers under conditions of long-term exposure by ingestion: 26 mg/kg/day

PNEC - fresh water 140.9 mg/l
PNEC - sea water 140.9 mg/l
PNEC sediment - fresh water 552 mg/kg
PNEC sediment - marine water 552 mg/kg
PNEC soil 28 mg/kg

Maximum allowable concentrations:
OEL = 900 mg/m3
OELCh = 1200 mg/m3

8.2 Exposure Control

8.2.1 *Appropriate technical control measures*

Local exhaust ventilation to remove vapors from their emission points and general ventilation of the room are necessary. Local ventilation intake openings at the work surface or below. General ventilation exhausts at the top of the room and at the floor. Ventilation systems must meet the conditions established due to the risk of fire. Do not use near sources of high temperature and sources of ignition. In the event of insufficient ventilation, use respiratory protection.

8.2.2 *Individual protection measures, such as personal protective equipment*

Respiratory tract: If the permissible concentrations of product vapors are exceeded, respiratory protection should be used - mask with filter A

Hands and skin: Use protective clothing made of natural materials (cotton) or synthetic fibers - antistatic coated

Eyes: Goggles

Occupational hygiene: General industrial hygiene regulations apply. Do not exceed permissible normative concentrations in the workplace environment. After finishing work, remove contaminated clothing. Before breaks in work, wash hands and face. After work, wash the whole body thoroughly. Do not eat, drink, or smoke while working.

8.2.3 *Environmental exposure controls*

Prevent entry into municipal water and sewage systems and watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
Liquid.

b) Smell
alcoholic

c) Odor threshold
No data available.

d) pH
It does not mark itself.

e) Melting point/freezing point No data available. f) Initial boiling point and boiling range
80-83 [°C]
g) Flash point 13[°C] h)

Evaporation rate
No data available. i)
Flammability
The substance is highly flammable.
j) Upper/lower flammability or explosive limits 12 / 2 [% V/V]. k) Vapour pressure No data available. l)
Vapour density
relative to air

>1

m) Relative density No data available. n) Total solubility

o) Partition coefficient: n-octanol/water
0.05.
p) Auto-ignition temperature 425 [°C] q)
Decomposition temperature
No data available. r) Viscosity
No data available. s) Explosive properties Does not exhibit explosive properties. t) Oxidizing properties No data available for the mixture.

9.2 Other information

Minimum ignition energy: 0.65 [mJ]
Electrical conductivity: 5000000.00 [pS/m]

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Reacts
with strong oxidizing agents and strong acids.

10.2 Chemical stability Under
normal conditions of use and storage the product is stable.

10.3 Possibility of hazardous reactions
Vapors mixed with air may form explosive mixtures.

10.4 Conditions to avoid Ignition sources,
open flames.

10.5 Incompatible Materials
Strong oxidizers.

10.6 Hazardous decomposition products
None known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - oral: LD50>2000 mg/kg (for 100% isopropanol)
Acute toxicity - skin: LD50>2000 mg/kg (for 100% isopropanol)
Acute toxicity - inhalation: LC50 (presumed) above 5 mg/l (for 100% isopropanol)
Corrosive/irritant effect: - eyes:
causes irritation - skin: does not irritate

Sensitizing effect:
-skin: non-sensitizing (guinea pig, test for 100% isopropanol) -inhalation: no data available

Mutagenicity: Ames test - negative (for 100% isopropanol)
Carcinogenicity: no data available
Reproductive toxicity: no data available
Specific target organ toxicity - single exposure: no data available
Specific target organ toxicity - repeated exposure: no data available
Aspiration hazard: no data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
Ecotoxicity (for 100% isopropanol):
Toxicity to fish - Leuciscus idus melanotus: LC50 >100mg/l/48h
Toxicity to daphnia - Daphnia magna: EC50 >100mg/l/48h
Toxicity to algae - Scenedesmus subspicatus: EC50 >100mg/l/72h

12.2 Persistence and degradability

Isopropanol is highly biodegradable: >70% after 10 days

12.3 Bioaccumulative potential

Log Pow = 0.05.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Isopropanol is not considered to be persistent, bioaccumulating nor toxic (PBT). It is not considered to be very persistent nor bioaccumulating (vPvB).

12.6 Other harmful effects

No data available.

SECTION 13: WASTE CONSIDERATIONS

13.1 Waste disposal methods

Do not dispose of the product together with municipal waste, do not introduce it into the sewage system. Do not allow contamination of ground and surface water.
Return used packaging (after thorough emptying) and unused product to the seller or designated authorized waste collector.

Proceed in accordance with Article 18 of the Act of 13 June 2013 on the management of packaging and packaging waste (Journal of Laws, item 888, 2013).
Special precautions: Dispose of
product and its packaging safely. Use caution when handling emptied containers that have not been cleaned or rinsed thoroughly. Vapours from product residues may create a highly flammable or explosive atmosphere inside the container.

WASTE CODE

07 01 04* Other organic solvents, washing liquids and mother liquors

SECTION 14: TRANSPORT INFORMATION

ADR/RID, IMDG, IATA

14.1 UN number (UN number)

1993

14.2 UN proper shipping name

14.3 Transport hazard class(es)

3, classification code F1

14.4 Packing group

II

14.5 Environmental hazards

Threat identification number 33.
Warning sticker

14.6 Special precautions for users

Always transport in closed containers that are upright and properly secured. Make sure that those transporting the product know what to do in the event of a failure or spillage

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental protection regulations specific to mixtures

Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws No. 63, item 322, 2011).
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 (Official Journal of the European Union, series L, No 353 of 31 December 2008) with subsequent amendments (adaptations to technical progress 1 - 6 ATP).

Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classification of substances and their mixtures (Journal of Laws of 2012, item 1018) with subsequent amendments.
Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protective equipment (Journal of Laws No. 259, 2173, 2005).
Regulation of the Minister of Labour and Social Policy of 6 June 2014 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 817 of 23 June 2014).

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to health in the work environment (Journal of Laws No. 33, item 166, 2011).
Regulation of the Minister of Health of 30 December 2004 on occupational health and safety related to the presence of chemical factors in the workplace (Journal of Laws No. 11, item 86, 2005, as amended).
Act of 19 August 2011 on the transport of dangerous goods (Journal of Laws No. 227, item 1367, 2011, as amended).

Government Statement of 26 July 2005 on the entry into force of amendments to Annexes A and B of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) concluded in Geneva on 30 September 1957 (Journal of Laws No. 178, item 1481, 2005 with subsequent amendments).
Act of 14 December 2012 on waste (Journal of Laws, item 21, 2013).
Act of 13 June 2013 on the management of packaging and packaging waste (Journal of Laws, item 888, 2013).

Regulation of the Minister of the Environment of 27 September 2001 on the waste catalogue (Journal of Laws No. 112, item 1206, 2001).
Act of 29 July 2005 amending the Act on Waste and certain other acts (Journal of Laws No. 175, item 1458, 2005).

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 (Official Journal of the European Union, series L No 396 of 30 December 2006, as amended).

15.2 Chemical safety assessment

The supplier did not perform a chemical safety assessment of the mixture.

SECTION 16: OTHER INFORMATION

Card prepared based on the recipe and ingredient safety data sheets.

Other sources of information:
Data for registered substances: http://echa.europa.eu/web/guest/information-on-chemicals/registered- substances

The information provided in the safety data sheet is intended to describe the product only from the point of view of safety requirements. The user is responsible for creating conditions for safe use of the product and it is the user who takes responsibility for the consequences resulting from improper use of this product.

H phrases and acronyms of symbols, hazard classes and category codes **used in Section 3. Safety data sheets:**

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airway.
H315	Irritating to skin.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic organisms.
H410	Very toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Flam. Liq. 2	Flammable liquid, hazard category 2.
Asp. Tox. 1	Aspiration Hazard Category 1.
STOT SE 3	Specific target organ toxicity – single exposure, hazard category 3, narcotic effect.

Skin Sens. 1	Skin sensitisation, hazard category 1.
Skin Irrit. 2	Skin irritation, hazard category 2.
Eye Irrit. 2	Eye irritation, hazard category 2.
Aquatic Acute 1	Posing a hazard to the aquatic environment – acute hazard, hazard category 1

Aquatic Chronic 1 Hazardous to the aquatic environment – chronic hazard, hazard category 1.

Abbreviations:

OEL - The highest permissible concentration at the workplace - the highest permissible weighted average concentration, the impact of which on an employee during an 8-hour working time, throughout his entire professional activity, should not cause any changes in his health or in the health of his future generations
OELCh - Maximum allowable momentary concentration - the highest allowable momentary concentration established as an average value that should not cause negative changes in the health of the employee and in the health of his future generations if it is maintained in the work environment for no longer than 30 minutes during a work shift

vPvB - Very persistent and very bioaccumulative substance
PBT - Persistent, Bioaccumulative and Toxic

DL50 – Lethal dose – a dose at which 50% of the tested animals die within a specified time period.

CL50 – Lethal concentration - concentration at which 50% of the tested animals die within a specified time period.

CI50 - median concentration causing 50% inhibition of a given parameter, e.g. growth in a given time period

CE50 – Effective concentration – effective concentration of a substance causing a response of 50% of the maximum value

DNEL - No Harmful Effect Level for Human Health - a level of exposure to a substance that does not cause any harmful effects on human health
PNEC - Predicted No Effect Concentration - the concentration of a substance below which no harmful effects on the environment are expected
BCF - Bioconcentration factor (bioconcentration) - the ratio of the concentration of a substance in an organism to its concentration in water at equilibrium
ADR - European agreement concerning the international carriage of dangerous goods by road (English) *Agreement on Dangerous Goods by Road)*
RID – Regulations *Concerning the International Transport of Dangerous Goods by* Rail

IMDG – International *Maritime Dangerous Goods* Code

IATA - International Air Transport Association *International Air Transport Association)*
CAS – the number assigned to a chemical substance in the *Chemical Abstracts Service* inventory
EC - reference number used in the European Union to identify dangerous substances, in particular those registered in the European Inventory of Existing Chemical Substances (EINECS) , or in the European List *of Notified Chemical* Substances (ELINCS), or the list of chemical substances listed in the publication *"No-longer polymers"*

UN number – a four-digit identification number of a material in the UN Hazardous Materials Inventory, derived from the UN Model Regulations, to which an individual material, mixture or article is classified

The product is subject to notification to the register maintained by the Chemicals Office in Lodz