

SAFETY DATA SHEET

Prepared in the format conforming to the Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ of EU no L132 of 29 May 2015)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

DEVELOPER SPAWCHEM AEROSOL
PN-EN 571-1 Cd-Ad

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Product for professional use. Aerosol product for testing welds in welding technology.
Uses advised against: Other not mentioned above.

1.3 Details of the supplier of the safety data sheet:

Supplier:

Zakład Chemii Technicznej TOPCHEM Stanisław Żygadło

12, Barytowa Str., 25-756 Kielce, Poland

Phone: + 48 41 345 47 47; +48 601 439 104

E- mail address: topchem@topchem.com.pl

1.4 Emergency telephone number

Emergency telephone number in Poland (operating Mo.-Fr. 8:00 – 15:00): + 48 601 439 104

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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 with later amendments:

Aerosols, Hazard Category 1 (Aerosol 1)

Extremely flammable aerosol. (H222)

Serious eye damage/eye irritation, Hazard Category 2 (Eye Irrit.2)

Causes serious eye irritation. (H319)

Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis (STOT SE 3)

May cause drowsiness or dizziness. (H336)

Harmful effects on human health:

In case of significant concentrations of vapours or direct contact with eyes, irritation, redness, tearing, conjunctivitis may occur. Contamination of the skin with large amounts or repeated pouring of liquid product may cause redness and dryness of the skin. High vapour concentration may cause symptoms similar to narcotic effects. The propellant gas is heavier than air and accumulates in the lower areas of the rooms, which may lead to unconsciousness and suffocation due to local lack of oxygen. Inhalation of a high concentration of propellant may cause nausea, headache and dizziness, uneven heart function. Prolonged exposure to the propellant's vapours may adversely affect the central nervous system. As with all liquefied gases, contact with rapidly evaporating liquid can cause burns (frostbite) of the skin and eyes.

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Environmental effects:

Not hazardous to the aquatic environment.

Adverse effects associated with physico-chemical properties:

Vapours of the product are heavier than air and may form explosive mixtures with air. Pressurised container: May burst if heated.

2.2 Label elements

Pictograms:



Signal Word: Danger

Hazard Statement:

H222 – Extremely flammable aerosol.
H229 – Pressurised container: May burst if heated.
H319 – Causes serious eye irritation.
H336 – May cause drowsiness or dizziness.
EUH066 – Repeated exposure may cause skin dryness or cracking.

Precautionary Statement:

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.
P251 - Do not pierce or burn, even after use.
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P280 – Wear eye protection/face protection.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional labelling:

Contains: Methyl acetate.

2.3 Other hazards

This mixture meets neither PBT nor vPvB criteria.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Product identifier: *DEVELOPER SPAWCHEM AEROSOL PN-EN 571-1 Cd-Ad*

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Mixture components:

Substance name	Index no.	CAS no.	EC no.	% mass fraction	Classification according to the Regulation (EC) No 1272/2008	
					Hazard Classes and Category Codes	Hazard statement codes
Hydrocarbons, C 3-C4; Petroleum gas Not subject to registration obligation pursuant to item 10 of Annex V to REACH Regulation	649-199-00-1	68476-40-4	270-681-9	60 - 80	Flam. Gas 1 Press. Gas*	H220
Methyl acetate Registration No. 01-2119459211-47-XXXX	607-021-00-X	79-20-9	201-185-2	20 - 40	Flam. Liq. 2 Eye Irrit. 2 - STOT SE 3	H225 H319 EUH066* H336

***Statements EUH066 and Press Gas are placed only on the label**

Full text of H statements, hazard classes and category codes have been specified in the Section 16 of this safety data sheet.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

- Inhalation: Remove casualty from exposure site to fresh air, place in reclining or sitting position, keep at rest and protect against heat loss. If breathing disorders occur, apply artificial respiration. If symptoms persist, call a physician.
- Skin contact: Rinse immediately with plenty of water, remove contaminated clothing, wash skin with plenty of water and soap. Consult a physician if necessary.
- Eye contact: Rinse immediately with plenty of lukewarm water for at least 15 min. Remove contact lenses. To avoid cornea damage, don't use jet stream. If the irritation persists, consult an ophthalmologist.
- Ingestion: Unlikely route of exposure because the product is used as an aerosol. If swallowed, don't provoke vomiting. Rinse mouth with plenty of water. If the victim is conscious, give plenty of water to drink. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed

In case of significant concentrations of vapours or direct contact with eyes, irritation, redness, tearing, conjunctivitis may occur. Contamination of the skin with large amounts or repeated pouring of liquid product may cause redness and dryness of the skin. High vapour concentration may cause symptoms similar to narcotic effects. The propellant gas is heavier than air and accumulates in the lower areas of the rooms, which may lead to unconsciousness and suffocation due to local lack of oxygen. Inhalation of a high concentration of propellant may cause nausea, headache and dizziness, uneven heart function. Prolonged exposure to the propellant's vapours may adversely affect the central nervous system. As with all liquefied gases, contact with rapidly evaporating liquid can cause burns (frostbite) of the skin and eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Apply symptomatic treatment. Provide the assisting physician with this SDS.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Fire foam, fire extinguishing carbon dioxide, extinguishing powders, water spray.

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- Unsuitable extinguishing media: Do not use a solid water jet.
- 5.2 **Special hazards arising from the substance or mixture**
During fire carbon oxides may be emitted. Aerosols can explode when heated to temperatures above 50 °C.
- 5.3 **Advice for firefighters**
Extremely flammable aerosol. Vapours of the product are heavier than air and may form explosive mixtures with air. They accumulate close to the ground surface and in the lower parts of the premises. Containers exposed to fire should be cooled from a safe distance with water spray (danger of explosion); if possible, remove them from the endangered area. Antistatic gas-tight protective suit, self-contained breathing apparatus.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing made of natural fabrics (cotton) or synthetic fibres, safety gloves made of nitrile rubber/chloroprene (thickness 0.65 ± 0.1 mm, breakthrough time ≥ 480 min) or nitrile rubber (thickness 0.4 ± 0.05 mm, breakthrough time ≥ 480 min) or and safety goggles. Remove from the affected area unprotected persons who do not participate in removal of the failure. Avoid direct contact with the mixture. Avoid breathing vapours.
- 6.2 **Environmental precautions**
Protect from releasing to sewage system, surface and ground water, soil.
- 6.3 **Methods and materials for containment and cleaning up**
Secure sink basins. If possible, stop the leak (close liquid inflow, seal). Damaged packaging place in an overpack. Vapours dilute with water spray. Eliminate sources of ignition (extinguish open fire, announce prohibition of smoking and usage of sparking tools). Small amounts absorb into chemically inert binding material (sand, diatomaceous earth), transfer to tight containers and pass to designated waste recipient. Rinse contaminated surface with plenty of water.
- 6.4 **Reference to other sections**
Remove according to the recommendations listed in the section 13.
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SECTION 7: HANDLING AND STORAGE

- 7.1 **Precautions for safe handling**
Provide appropriate general and local ventilation. Keep away from heat and ignition sources. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. It is recommended to take special precautions during work with the mixture in order to avoid contact with eyes and skin. Do not breathe vapours. Protect from releasing to sewage system, water courses and soil. Do not eat, drink or smoke while handling. Wash hands during intervals and after finishing work. Take off contaminated clothing and wash it before reusing.
- 7.2 **Conditions for safe storage, including any incompatibilities**
Vapours of the product may form explosive mixtures with air. They are heavier than air and accumulate close to the ground surface. Store in original, properly labelled, tightly closed containers; in a dry, cool, properly ventilated storage premise, equipped with explosion-proof electrical and ventilating systems. Pressurised container, protect from sunlight, do not expose to temperatures exceeding 50 °C. Keep away from sources of high temperatures, ignition sources, oxidizers.
- 7.3 **Specific end use(s)**
No information about the applications other than those mentioned in subsection 1.2.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Controls parameters

Component	CAS-no.	Parameter	value	unit
Calcium carbonate - inhalable fraction	471-34-1	OEL	10	mg/m ³
Butane	106-97-8	WEL -8-hr TWA ¹	1450	mg/m ³
			600	ppm
		STEL – 15-min ¹	1840	mg/m ³
			750	ppm
Methyl acetate	79-20-9	WEL -8-hr TWA ¹	616	mg/m ³
			200	ppm
		STEL – 15-min ¹	770	mg/m ³
			250	ppm

¹ EH40/2005 Workplace exposure limits

Methyl acetate:

DNEL_{workers} (inhalation, long-term toxicity, systemic effects) 610 mg/m³

DNEL_{workers} (inhalation, long-term toxicity, local effects) 305 mg/m³

DNEL_{workers} (skin, long-term toxicity, systemic effects) 88 mg/kg b.w./day

DNEL_{general population} (inhalation, long-term toxicity, systemic effects) 131 mg/m³

DNEL_{general population} (inhalation, long-term toxicity, local effects) 152 mg/m³

DNEL_{general population} (skin, long-term toxicity, systemic effects) 44 mg/kg b.w./day

DNEL_{general population} (oral, long-term toxicity, systemic effects) 44 mg/kg b.w./day

PNEC_{freshwater}: 0.12 mg/l

PNEC_{marine water}: 0.012 mg/l

PNEC_{sludge-freshwater}: 0.128 mg/kg sludge

PNEC_{sludge-marine water}: 0.0128 mg/kg sludge

PNEC_{soil}: 0.0416 mg/gleby

PNEC_{intermittent releases}: 1.2 mg/l

PNEC_{STP}: 650 mg/l

8.2 Exposure controls

8.2.1 *Appropriate engineering controls*

Local exhaust ventilation eliminating vapours from emission places and general ventilation are necessary. Suction inlets of local ventilation should be placed at the height of work plane or below. Uptake ventilators of general ventilation should be placed at the top of the room and near the floor. Ventilation installations must comply with the conditions set for the risk of fire or explosion. Do not use near heat and ignition sources. In case of insufficient ventilation wear respiratory protection. Provide shower and eye wash station.

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8.2.2 Individual protective measures such as personal protective equipment

- Respiratory protection: If permissible concentrations of vapours are exceeded, use respiratory protection with particle filter marked white and labelled P2 and vapour filter marked brown and labelled A. You can apply combined filters AP.
- Skin and hands protection: Wear protective clothing made of natural fabrics (cotton) or synthetic fibres, safety gloves made of nitrile rubber/chloroprene (thickness 0.65 ± 0.1 mm, breakthrough time ≥ 480 min) or nitrile rubber (thickness 0.4 ± 0.05 mm, breakthrough time ≥ 480 min).
- Eye/face protection: Not required.
- Occupational hygiene: General industrial hygiene rules apply. Don't allow exceeding occupational exposure levels. After finishing work remove contaminated clothes. Wash hands and face before work breaks. Wash entire body after finishing work. Do not drink, eat and smoke during work.

8.2.3 Environmental exposure controls

Prevent from draining to a municipal sewage system and watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance
White liquid sprayed with butane / propane.
- b) Odour
Ester-like.
- c) Odour threshold
No data available.
- d) pH
Not determined (mixture composed of organic substances).
- e) Melting/freezing point
No data available.
- f) Initial boiling point and boiling range
No data available.
- g) Flash point
Not applicable – aerosol.
- h) Evaporation rate
No data available.
- i) Flammability
The mixture is extremely flammable.
- j) Upper/lower flammability or explosive limits
No data available.
- k) Vapour pressure
No data available.
- l) Vapour density
No data available.
- m) Relative density
< 1 (water = 1)
- n) Solubility(ies)
In water: insoluble.
- o) Partition coefficient: n-octanol/water
No data available.
- p) Auto-ignition temperature
No data available.

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- q) Decomposition temperature
No data available.
- r) Viscosity
No data available.
- s) Explosive properties
Vapours of the product may form explosive mixtures with air.
- t) Oxidising properties
No data available for the mixture.
- 9.2 Other information
No data available.

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity
No reactivity if stored and used as intended.
- 10.2 Chemical stability
Stable in standard conditions of storage and use.
- 10.3 Possibility of hazardous reactions
The container contains a mixture under pressure - protect from sunlight, do not expose to temperatures exceeding 50 °C. Vapours form explosive mixtures with air.
- 10.4 Conditions to avoid
High temperature, ignition sources, open fire.
- 10.5 Incompatible materials
Strong oxidising agents, bases.
- 10.6 Hazardous decomposition products
Not known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Based on available data, the classification criteria are not met. (calculation method)

<u>Component</u>	<u>CAS-no</u>	<u>Method</u>	<u>value</u>	<u>unit</u>
Butane	106-97-8	LC ₅₀ – inhalation rat	658	g/m ³ (4h)
		LC ₅₀ – inhalation mouse	680	g/m ³ (2h)
Propane	74-98-6	LC ₅₀ – inhalation rat	658	mg/l (4h)
		LC ₅₀ – inhalation mouse	680	mg/l (2h)
Methyl acetate	79-20-9	LD ₅₀ – oral rat	> 10000	mg/kg
		LC ₅₀ – inhalation rat	> 21.1	mg/l (4h)
		LD ₅₀ – skin rabbit	> 14000	mg/kg

Skin corrosion/irritation:

Based on available data, the classification criteria are not met, however repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation:

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Causes serious eye irritation.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

May cause drowsiness or dizziness.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Based on available data, the classification criteria are not met.

Acute toxicity:

<u>Component</u>	<u>CAS-no</u>	<u>Method</u>	<u>value</u>	<u>unit</u>
Methyl acetate	79-20-9	LC ₅₀ – fish (<i>Pimephales promelas</i>)	320-399	mg/l (96h)
		EC ₅₀ – invertebrates (<i>Daphnia magna</i>)	1027	mg/l (24h)
		EC ₅₀ – algae (<i>Scenedesmus subspicatus</i>)	>120	mg/l (72h)
		EC ₅₀ – bacteria (<i>Photobacterium phosphoreum</i>)	6100	mg/l (30min)
Butane	106-97-8	LC ₅₀ – fish (<i>Carassius auratus</i>)	15,8	mg/l (96h)
		EC ₅₀ – algae (<i>Scenedesmus subspicatus</i>)	7,71	mg/l (96h)
Propane	74-98-6	LC ₅₀ – fish (<i>Carassius auratus</i>)	27,98	mg/l (96h)
		EC ₅₀ – algae (<i>Scenedesmus subspicatus</i>)	7,71	mg/l (96h)

12.2 Persistence and degradability

Methyl acetate: readily biodegradable (83% in 14 days)

12.3 Bioaccumulative potential

Partition coefficient octanol/water: (K_{ow}): No data available for the mixture.

Methyl acetate: 0,73

Bioconcentration factor (BCF): No data available for the mixture.

Butane: 33

Propane: 13

12.4 Mobility in soil

No data available for the mixture.

12.5 Results of PBT and vPvB assessment

The mixture meets neither PBT nor vPvB criteria.

12.6 Other adverse effects

No data.

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not dispose together with municipal waste. Prevent from draining to a municipal sewage system and watercourses. Waste generation must be kept to a minimum.

European Waste Code:

16 05 04* Gases in pressure containers (including halons) containing dangerous substances

Waste type:

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP3 Flammable

HP4 Irritant - Skin irritation and eye damage

Special precautions:

Dispose product and packaging off safely. Care should be taken when handling emptied containers that have not been thoroughly cleaned.

SECTION 14: TRANSPORT INFORMATION

ADR/RID, IMDG, IATA

14.1 UN number

1950

14.2 UN proper shipping name

AEROSOLS flammable

14.3 Transport hazard class(es)

2

14.4 Packing group

-

14.5 Environmental hazards

The product is not hazardous to the environment according to the UN Model Regulations.

14.6 Special precautions for user

No special precautions.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Classification code: 5F

Labels: 2.1

Limited quantities: 1 1

SECTION 15: REGULATORY INFORMATION

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

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

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Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ EU L396 of December 30, with later amendments).

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 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 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 (OJ EU L353 of December, 31 2008, with later amendments ATP 1-13).

COMMISSION REGULATION (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives.

15.2 Chemical safety assessment

Supplier has not assessed the chemical safety of the mixture.

SECTION 16: OTHER INFORMATION

This safety data sheet has been prepared in the Ignacy Mościcki' Industrial Chemistry Research Institute based on the formula and safety data sheets for the components.

Classification of the product was performed on the basis of criteria set in Annex I do CLP Regulation.

Data for the registered substances: <http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

The information contained in this safety data sheet describes the product exclusively from the safety requirements perspective. The user is responsible for setting up the conditions for safe use of the product and bears a sole responsibility for the consequences of its incorrect use.

Text of H statements, hazard classes and category codes used in the section 3 of this safety data sheet:

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking

Flam. Gas 1	Flammable gases, Hazard Category 1
Press. Gas	Gases under pressure: Liquefied gas
Flam Liq. 2	Flammable liquids, Hazard Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis

Abbreviations:

IOELV	Indicative Occupational Exposure Limit Value (8 h/day).
WEL	Workplace Exposure Limits
STEL	Short Term Exposure Limit
vPvB	very Persistent very Bioaccumulative.
PBT	Persistent, Bioaccumulative, Toxic.
LD ₅₀	Lethal dose, median dose, where 50 % of test subject dies.
LC ₅₀	Lethal concentration, median concentration where 50 % of test subjects dies.
EC ₅₀	The effective concentration of substance that causes 50% of the maximum response.
DNEL	Derived No-Effect Level.
PNEC	Predicted No Effect Concentration.

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NOEC	No observed effect concentration.
BCF	Biological Concentration Factor.
ADR	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

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