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Trade Name: **HEAT SILVER**

SECTION 1: Identification of the mixture and the company/undertaking

1.1 Product identifier:

Trade Name: HEAT SILVER

Mixture description: Solvent coating (aerosol).

1.2 Relevant identified uses of the mixture or mixture and uses advised against:

 Identified uses:
 Paint, surface treatment.

 Uses advised against:
 Recommended for identified uses.

1.3 Details of the supplier of the safety data sheet:

GOX7-EUROPE s.r.o.

Chlumčanská 396

439 02 Cítoliby, Czech republic

Tel.:+420 777 691 661

competent person responsible for MSDS: info@gox7.cz

1.4 Emergency telephone number:

112 (General emergency phone).

SECTION 2: Hazards identification

The mixture is classified as dangerous as follows:

2.1 Classification of the mixture:

according to 1272/2008/EC Aerosol 1; H222, H229
Eye Irrit. 2; H319
STOT SE 3; H336

Full text of H-phrases: see section 16.

The most important adverse physicochemical, human health and environmental effects:

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

2.2 Label elements:

hazard pictograms	
signal word	Danger.
ingredients of the mixture to be labeled	Contains acetone, 2-butanone, methanol, 2-butoxyethanol.
hazard statements	 H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
precautionary statements	 P102 Keep out of reach of children. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P403 Store in a well-ventilated place. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P280 Wear protective gloves/protective clothing/eye protection. P410+P412 Protect from sunlight. Do not expose to

SAFETY DATA SHEET			
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	temperatures exceeding 50 ° P501 Dispose of contents/containe waste collection in the village	r at the site of hazardous	

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supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or

cracking.

2.3 Other hazards:

The mixture meets not the criteria for PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

3.2.1 Substances presenting a health or environmental hazard in the mixture

Chemical identity	CAS	EC-No. Registration No.	Content ***) (wt. %)	Classification 1272/2008/EC
acetone	67-64-1	200-662-2 not available	32 - 34	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066
petroleum gases, liquefied (LPG) *)	68476-85-7	270-704-2 not available	approx. 25	Flam. Gas 1; H220 Press. Gas (Liq.); H280
<i>n</i> -butyl-acetate	123-86-4	204-658-1 not available	approx. 11	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066
2-methoxy-1-methylethyl acetate	108-65-6	203-603-9 not available	approx. 5	Flam. Liq. 3; H226
2-butoxyethanol; ethylene glycol monobutyl ether	111-76-2	203-905-0 not available	approx. 5	Acute Tox. 4; H302+H312+H332 Eye Irrit. 2; H319 Skin Irrit. 2; H315
2-butanone; ethyl methyl ketone	78-93-3	201-159-0 not available	approx. 5	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066
aluminium powder	7429-90-5	231-072-3 not available	approx. 5	Flam. Sol. 1; H228 Water-react. 2; H261
naphtha (petroleum), hydrotreated heavy **)	64742-48-9	265-150-3 not available	approx. 0,3	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411
xylene	1330-20-7	215-535-7 not available	approx. 0,3	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Acute Tox. 4; H312+H332
methanol	67-56-1	200-659-6 not available	approx. 0,3	Flam. Liq. 2; H225 Acute Tox. 3; H301+H311+H331 STOT SE 1; H370
ethylbenzene	100-41-4	202-849-4 not available	approx. 0,3	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Acute Tox. 4; H332 STOT RE 2; H373 Aquatic Chronic 3; H412

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2-methylpropan-1-ol; iso-butanol	78-83-1	201-148-0 not available	approx. 0,3	Flam. Liq. 3; H226 STOT SE 3; H336 STOT SE 3, H335 Eye Dam. 1; H318 Skin Irrit. 2; H315
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Contains less than 0.1% of 1,3-butadiene *) and benzene **); ***) see section 16 classification procedure.

3.2.2 Impurities, stabilising aditives, constituents other than the main constituent

Chemical identity	CAS	EC-No. Registration No.	Content (wt. %)	Classification 1272/2008/EC
acrylic resin	113041-34-2	 not available	< 8	not classified
talc	14807-96-6	238-877-9 not available	< 1	not classified

SECTION 4: First aid measures

Keep the person at physical and mental rest and warm. In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

4.1 Description of first aid measures:

Inhalation.

Move person to fresh air. If breathing stops, apply artificial respiration and seek immediate medical attention. Place unconscious person on the side in the recovery position and ensure breathing can take place.

Skin contact:

Remove contaminated clothing immediately and wash skin with soap and water. Do not use solvents or thinners.

Eye contact:

Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes (least 15 minutes). Get medical attention.

Ingestion:

Unlikely (aerosol). If this nevertheless happens, rinse out mouth with clean water. Do not induce vomiting. Get medical attention immediately. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

4.2 Most important symptoms and effects, both acute and delayed:

Overexposure may result in light headedness, staggering gait, dizziness, and possible nausea. May cause severe eye irritation. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness and possible contact dermatitis. Exposure to solvent vapour concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane irritation and adverse effects on the kidneys, liver and central nervous system.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:

Use water fog, dry chemical, carbon dioxide or foam.

Extinguishing media which shall not be used for safety reasons:

Solid streams of water may be ineffective. Burning product will float on the surface and spread fire.

5.2 Special hazards arising from the substance:

Exposure of containers to extreme heat and flames can cause them to rupture often with violent force.

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Vapours are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.

5.3 Advice for fire-fighters:

In the event of fire, wear self-contained breathing apparatus and clothing protective against chemicals. Keep extinguishing aerosols away from the danger area, if possible without risk.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Use non-sparking tools, avoid electrostatic charge. Other protective measures - see section 7.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not allow to enter waters or soil. Report spills to authorities as required.

6.3 Methods and material for containment and cleaning up:

Aerosol, mainly local air pollution will occur. If, however, a liquid fraction is leaking, absorb spillage using an absorbent, such as earth, sand or vermiculite. Place in container for disposal according to local regulations (see section 13). Pump off larger quantities. Use non-sparking tools. Afterwards ventilate area and wash spill site.

6.4 Reference to other sections:

Protective equipment: see section 8. Dispose according to the section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Provision of very good ventilation in the working area. Vapour/air mixtures are heavier than air. Adequate ventilation at the floor area must be ensured as well. Eye bath required. These locations must be signposted clearly. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. Keep containers tightly sealed. Prevent formation of aerosols. Do not use any tools that cause sparks.

When using, do not eat, drink or smoke. Wash hands with warm water and soap before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities:

Store in original tightly closed packing in dry and well-ventilated areas. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature: 5 - 30 °C. Keep away from direct sunlight.

7.3 Specific end use(s):

In household and industry.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.1.1 Exposure limit value in UK:

LPG: acetone:

8 h: 1750 mg/m³ short: 2180 mg/m³ 8 h: 1210 mg/m³ short: 3620 mg/m³

<u>n-butyl-acetate:</u> <u>talc:</u>

8 h: 724 mg/m³, short: 966 mg/m³ 8 h: 1 mg/m³

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2-butoxyethanol:		aluminium, metal:	
8 h: 123 mg/m³,	short: 246 mg/m ³	8 h: 10 mg/m ³	
2-butanon:		iso-butanol:	
8 h: 600 mg/m ³	short: 899 mg/m ³	short: 154 mg/m ³	
ethylbenzene:		2-methoxy-1-methyl	ethyl acetate:
8 h: 441 mg/m³,	short: 552 mg/m ³	8 h: 274 mg/m³,	short: 548 mg/m³
xylene:		methanol:	
8 h: 220 mg/m³,	short: 441 mg/m ³	8 h: 266 mg/m³,	short: 333 mg/m³

8.1.2 DNEL:

DNEL, PNEC are not available.

8.2 Exposure controls

8.2.1 Exposure reduction (technical measures):

Where exposure cannot be prevented by other means the use of individual protection measures, such as personal protection equipment is necessary. Ensure adequate ventilation of the workplace. Regularly measure the concentration of this agent in the workplace atmosphere.

8.2.2 Individual protection measures, such as personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. Workers in the risky process/areas identified should be trained.

Respiratory protection:	Required when vapours/aerosols are generated (recommended filter type A) and where risk assessment shows air-purifying respirators are appropriate use.
Hand protection:	Handle with gloves, e.g. nitril-rubber, strength > 0.55 mm, penetration time > 480 min.; leather is not suitable.
Eye/face protection:	chemical safety goggles
Skin protection:	suitable protective clothing

8.2.3 Environmental exposure reduction:

Uncontrolled escape of substance/formulation into environment is to be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance (at 20	°C):	aerosol
Colour:		silver
Odour:		characteristic
Odour threshold:		not available
pH (at 20 °C):		not available
Melting point/freez	ing point:	not available
Boiling point (range	e) <i>:</i>	not available
Flash point:		< -18 °C (propellant gas)
Evaporation rate:		not available
Flammability:		flammable mixture
Explosive limits	lower: (% vol.)	1,8 (propellant gas)
	upper: (% vol.)	12,8 (propellant gas)
Vapour pressure: (20 °C)	not available
Vapour density:		not available
Relative density:		not available
Solubility in water	(20 °C) :	not available
Partition coefficien	t: n-octanol/water:	not available
Auto-ignition temp	erature:	not available

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Decomposition temperature:	not available
Viscosity:	not available
Explosive properties:	non-explosive
Oxidising properties:	none
9.2 Other information	
not known	

SECTION 10: Stability and reactivity

10.1 Reactivity:

Low reactivity.

10.2 Chemical stability:

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions:

Not known.

10.4 Conditions to avoid:

Heat, flames and sparks. Protect from higher temperatures (over 50 ° C) and direct sunlight, risk of aerosol packaging explosion. Do not use in the presence of a source of ignition.

10.5 Incompatible materials:

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:	
- LD₅o oral, rat (mg.kg⁻¹):	ATE $_{\text{mixture}}$ > 2000 (for ingredients with LD50 > 2000 but classified with H302, ATE is used according to table 3.1.2 CLP)
- LD ₅₀ skin, rat or rabbit (mg.kg ⁻¹):	ATE mixture > 2000 (for ingredients with LD50 > 2000 but classified with H312, ATE is used according to table 3.1.2 CLP)
- LC₅o inhalation, rat, gas or vapour (mg.l⁻¹):	ATE $_{\text{mixture}}$ > 20 (for ingredients with LD50 > 20 but classified with H332, ATE is used according to tab. 3.1.2 CLP)
Skin corrosion/irritation:	does not reach the limit for classification
Serious eye damage/irritation:	irritant, cat. 2
Respiratory or skin sensitisation:	no
Germ cell mutagenicity:	no
Carcinogenicity:	no
Reproductive toxicity:	no
STOT-single exposure:	may cause drowsiness or dizziness
STOT-repeated exposure:	may cause skin dryness and cracking
Aspiration hazard:	no
Additional information:	

SECTION 12: Ecological information

12.1 Toxicity:

not known

ı	12.1 TOXICITY.	
I	- LC₅₀ 96 H, fish (mg.l ⁻¹):	no data available
ı	- EC₅₀ 24 H, daphnia (mg.l⁻¹):	no data available

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- IC₅₀ 72 H, algae (mg.f¹):	no data available
12.2 Persistence and degradability:	no data available
12.3 Bioaccumulative potential:	no data available
12.4 Mobility in soil:	no data available
12.5 Results of PBT and vPvB assessment:	product is neither a PBT nor a vPvB substance
12 6 Other adverse effects:	

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Disposal methods of the substance and the contaminated packaging:

Fully use the aerosol. Do not take the unused product into the collection or other disposal. Do not throw into the fire! Dispose of the packaging after full emptying. Never remove it by draining into drains! The waste producer is responsible for sorting waste and disposing of. Potential EU waste-code 08 01 11 for container, 15 01 10 for mixture.

Physical/chemical properties that may affect waste treatment options:

Extremely flammable.

Union provisions relating to waste:

- directive 2008/98/EC

SECTION 14: Transport Information		
14.1 UN number:	1950	
14.2 UN proper shipping name:		
- ADR/RID/IMDG/IATA	AEROSOLS, flammable	
14.3 Transport hazard class(es):	2	
14.4 Packing group:	-	
14.5 Environmental hazards:	no	
14.6 Special precautions for user:	none	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	not available	
ADR/RID:		
- classification code	5F	
- labels	2.1	
- hazard identification code	-	
- tunnel restriction code	D	
IMDG:		
- EmS	F-D, S-U	

SECTION 15: Regulatory information

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

Regulation No. 1907/2006/ES, REACH.

Regulation No. 1272/2008/ES, CLP.

15.2 Chemical safety assessment:

No data available.

SECTION 16: Other information

Reason for alteration:

First edition.

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Key or legend to abbreviations and acronyms used in the safety data sheet:

Flam Gas 1 flammable gas, cat. 1

Press. Gas (liq.) gas under pressure (liquefied)
Flam. Liq. 3 flammable liquid, cat. 3
Flam. Liq. 2 flammable liquid, cat. 2
Flam. Sol. 1 flammable solid, cat. 1

Water-react. 2 in contact with water emit flammable gases, cat. 2

Asp. Tox. 1 aspiration toxicity, cat. 1
Aerosol 1 highly flammable aerosol

STOT SE 3 specific target organ toxicity after single exposure, cat. 3 Aquatic Chronic 3 hazardous to the aquatic environment, long term, cat. 3 hazardous to the aquatic environment, long term, cat. 2

Skin Irrit. 2 irritating for skin, cat. 2
Eye Irrit. 2 irritating for eyes, cat. 2
Acute Tox. 4 acute toxicity, cat. 4
Acute Tox. 3

STOT RE 2 specific target organ toxicity after repeated exposure, cat. 2 STOT SE 1 specific target organ toxicity after single exposure, cat. 1

Eye Dam. 1 eye damage, cat. 1

NOEC No Observed Effect Concentration

PBT Persistent, bioaccumulative, toxic chemical

vPvB Very Persistent and Very Bioaccumulative chemical

DNEL Derived No Effect Level

PNEC Predicted No Effect Concentration
CLP regulation No. 1272/2008/EC
REACH regulation No. 1907/2006/EC

bw body weight

Sources of key data used to compile the Safety Data Sheet:

Chemical databases and tables, tests.

List of H-phrases:

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H226 Flammable liquid and vapour. H225 Highly flammable liquid and vapour.

H220 Extremely flammable gas.

H228 Flammable solid.

H261 In contact with water releases flammable gases. H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.

H332 Harmful if inhaled.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled

H312+H332 Harmful in contact with skin or if inhaled.

H318 Causes serious eye damage.

H301+H311+H331 Very toxic if swallowed, in contact with skin or if inhaled

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ĺ	H370	Causes damage to organs.
I	H373	May cause damage to organs through prolonged or repeated exposure.
I	EUH066	Repeated exposure may cause skin dryness or cracking.
I	P102	Keep out of reach of children.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
I	P403	Store in a well-ventilated place.
I	P211	Do not spray on an open flame or other ignition source.
I	P251	Do not pierce or burn, even after use.
I	P280	Wear protective gloves/protective clothing/eye protection.
I	P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
ı	P501	Dispose of contents/container at the site of hazardous waste collection in the

Training advice:

According to MSDS.

Relevant information for classification:

village.

According to additional method of CLP.

^{***)} For classification, concentrations stated in Section 3 were recalculated according to article 1.1.3.7 of Annex I to CLP.