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Reviewed on:	GALVA SPRAY	Version: 1.0

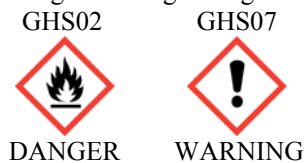
1. Section 1. Identification of the substance/mixture and of the company/undertaking:

- 1.1. Product identifier : **GALVA SPRAY - R 34547**
- 1.2. Relevant identified uses of the substance or mixture and uses advised against: Conducting quick-drying weldable electroplate.
- 1.3. Details of the supplier of the safety data sheet:
Identification of manufacturer/Supplier:
RETECH, s.r.o.
Vackova 1541/4
150 00 Praha-5 Stodůlky
Telephone/Fax: +420 327 596 128, +420 327 596 428
Information: info@retech.cz
- 1.4. Emergency telephone number:
RETECH Suchdol 212, Suchdol u Kutné Hory
Tel.+420 327 596 128 (7.30-16.00 hour)
Toxicology information number, Na bojišti 1, 128 08 PRAHA 2
Tel. +420 224 919 293, +420 224 915 402 (24 hours a day)

2. Section 2. Hazard identification: The product is labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version. The classification is in line with current EC lists, It is expanded, however, by information from technical literature and by information furnished by supplier companies.

- 2.1. Classification of the substance or mixture:
Classification according to Regulation (EC) No 1272/2008:
Flam. Aerosol 1 H222 Extremely flammable aerosol.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
- EUH066 Repeated exposure may cause skin dryness or cracking.
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC:
F+ Extremely flammable R12 Extremely flammable
Xi-Irritant R36 Irritating to eye.
- R66 Repeated exposure may cause skin dryness or cracking.
R67 Vaporous may cause drowsiness and dizziness.

- 2.2. Label elements:
Labelling according to Regulation (EC) No 1272/2008:



H222 Extremely flammable aerosol.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Labelling according to Directive 1999/45/EC:



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R 12 Extremely flammable.
R 36 Irritating to eye.
R 66 Repeated exposure may cause skin dryness and cracking.
R 67 Vapours may cause drowsiness and dizziness.

Special labeling of certain preparations:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition.- No smoking. Keep out of reach of children.

2.3. Other hazards:

Results of PBT and vPvB assessment:

PBT: Not applicable

vPvB: Not applicable

Buildup of explosive mixtures possible without sufficient ventilation.

3. Section 3. Composition/information on ingredients:

3.2. Mixtures:

Description: The active ingredient in propellants

Dangerous components:

CAS: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49-xxxx	Acetone F R11; Xi R36; R66,R67 GHS02 Flam. Liq. 2, H225; GHS07 Eye Irrit. 2, H319; STOT SE 3, H336; EUH066	25-50%
CAS: 75-28-3 EINECS: 200-857-2	Isobutan F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	10-25%
CAS: 123-86-4 EINECS: 204-658-1	Butylacetate R10-66-67 GHS02 Flam. Liq. 3, H226; GHS07 STOT SE 3 H336, EUH066	10-25%
CAS: 106-97-8 EINECS: 203-448-7	Butane (containing <0,1% butadiene (203-450-8)) F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	2,5-10%
CAS: 74-98-6 EINECS: 200-827-9	Propane F+ R12 GHS02 Flam. Gas 1, H220; GHS04 Press. Gas, H280	2,5-10%
CAS: 1330-20-7 EINECS: 215-535-7	Xylene (mix) R10; Xn R20/21; Xi R38 GHS02 Flam. Liq. 3, H226; GHS07 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%

Additional information: For the wording of the listed risk phrases refer to section 16.

4. Section 4. First aid measures:

4.1. Description of first aid measures:

After inhalation: Move the exposed person to fresh air at once. Keep the affected person warm and at rest. consult doctor in case of symptoms.

After skin contact: Instantly wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Do not induce vomiting; Rinse mouth thoroughly with water and give large amounts of water to people not unconscious. Call for medical help immediately.

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Most important symptoms and effects, both acute and delayed: In case of unconsciousness place patient stable in side position for transportation.
 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5. Section 5. Fire fighting measures:

- 5.1. Suitable extinguishing agents: Carbon dioxide (CO₂), fire-extinguishing powder, water haze or alcohol resistant foam.
 For safety reasons unsuitable extinguishing agents: Water with full jet.
- 5.2. Special hazards arising from the substance or mixture:
 Can form explosive gas-air mixtures.
 Formation of toxic gases is possible during heating or in case of fire.
- 5.3. Advice for firefighters: Wear protective equipment/clothing when fighting fires.
 Aerosols may explode when overheated.
 Cool the container with water.
 Fire residues and contaminated fire fighting water is disposed of in accordance with applicable regulations.

6. Section 6. Accidental release measures:

- 6.1. Personal precautions, protective equipment and emergency procedures:
 Wear protective equipment see Section 8.2. Ensure adequate ventilation. Let evaporate. Keep unprotected person away. Keep away from ignition sources. Avoid sparks, flames, heat and smoking.
- 6.2. Environmental precautions:
 Do not allow product to reach sewage system, surface or ground water.
 Inform respective authorities in case of seepage into water course or sewage system.
- 6.3. Methods and material for containment and cleaning up:
 Ensure adequate ventilation.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose of contaminated material as waste according to Section 13.
- 6.4. Reference to other sections:
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment
 See Section 13 for disposal information.

7. Section 7. Handling and storage:

- 7.1. Information for safe handling:
 Information about protection against explosions and fires: Ensure good ventilation/exhaustion at the workplace.
 Beware: Container is pressurized. Keep away from direct sun exposure and temperatures over 50°C.
 Do not open by force or throw into fire even after use.
 Do not spray on flames or red-hot objects.
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
- 7.2. Conditions for safe handling, including any incompatibilities:
 Requirements to be met by storerooms and containers: Store in cool location.
 Observe official regulations on storing packaging with pressurized containers.
 Information about storage in one common storage facility: Observe official regulations on storing packaging with pressurized containers.
 Further information about storage conditions: Store in cool, dry conditions.
 Protect from heat and direct sunlight.
- 7.3. Specific end use(s): No further relevant information available.

8. Section 7. Exposure controls and personal protection:

- 8.1. Control parameters:
 Components with limit values that require monitoring at the workplace:

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67-64-1 acetone	WEL Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1810 mg/m ³ , 750 ppm
106-97-8 butane	containing < 0.1% butadiene (203-450-8) WEL Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
1330-20-7 Xylene	WEL Short-term value: 441 mg/cm ³ , 100 ppm Long-term value: 220 mg/cm ³ , 50 ppm
74-98-6 Propane	WEL Short-term value: 3600 mg/cm ³ , 2000 ppm Long-term value: 1800 mg/m ³ , 1000 ppm
123-86-4 Butylacetate	WEL Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
Additional information:	The lists that were valid during the compilation were used as basis.
8.2 Exposure controls:	
Eye protection:	Tightly sealed goggles.
Breathing equipment:	Use suitable respiratory protective device in case of insufficient ventilation. In case of brief exposure or low pollution use respiratory filter device-filter AX/P2. In case of intensive or longer exposure use self-contained respiratory protective device.
Protection of hands:	Solvent resistant gloves. Selection of glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves: Butyl rubber, BR Recommended thickness of the material: ≥ 0.7 mm Penetration time of glove material: ≥ 60 min The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
8.3. Protection of skin:	Protective working clothing.
General protective and hygienic measures:	Keep away from foodstuffs, beverages and food. Immediately remove all soiled and contaminated clothing. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.

9. Section 9. Physical and chemical properties:

9.1. Information on basic physical and chemical properties:

Appearance:

form: Aerosol

colour: Grey

Odour threshold: Acetone-like

Value pH: Not determined

Melting point/freezing point: Not determined

Initial boiling point/boiling range: Not determined

Flash point: Not determined

Evaporation rate: Not applicable

Flammability (solid,gas): Not applicable

Ignition temperature: >200°C

Explosive properties: Product is not explosive. However, formation of explosive air/steam mixtures is possible.

Upper/lower flammability or explosive limits:

Explosion limits: lower (% Vol): Not determined

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	upper (% Vol):	Not determined
	Vapour pressure (at 20°C):	Not determined
	Vapour density (at 20 °C):	Not determined
	Relative density:	0.786 g/cm ³
	Solubility in/miscibility with	
	- water	Not miscible or difficult to mix
	Partition coefficient (n-octanol/water):	Not determined
	Auto-ignition temperature:	Not determined
	Decomposition temperature:	Not determined
	Viscosity:	Not determined
	Oxidative properties:	Not determined
9.2.	Other information:	
	Organic solvents:	83.4%
	VOC:	655.9 g/l

10.	Section 10. Stability and reactivity:	
10.1.	Reactivity:	No further relevant information available.
10.2.	Chemical stability:	No further relevant information available.
10.3.	Possibility of hazardous reactions:	No dangerous reactions known.
10.4.	Conditions to avoid:	There are known no conditions to avoid.
10.5.	Incompatible materials:	There are known no incompatible materials.
10.6.	Hazardous products of decomposition:	Fire creates: Vapours/ gases/ fumes of: Carbon monoxide (CO). Carbon dioxide (CO ₂).

11.	Section 11. Toxicological information:	
11.1	Information on toxicological effects:	
	Acute toxicity:	
	LD/LC50 values relevant for classification:	
	1330-20-8 Xylene	Oral LD50 8700 mg/kg (rat) Dermal LD50 2000 mg/kg (rbt) Inhalative LC50/4h 6350 mg/l (rat)
	67-64-1 Acetone	Oral LD50 >5800 mg/kg (rat) Dermal LD50 >20000 mg/kg (rbt) Inhalative LC50/4h >193 mg/l (rat)
	Irritation: on the skin:	Long-term or repeated contact may cause skin irritation.
	on the eye:	Irritating effect.
	Corrosivity:	Not corrosive.
	Sensitization:	No sensitizing effect known.
	Repeated dose toxicity:	No further relevant information available.
	Carcinogenicity:	No further relevant information available.
	Mutagenicity:	No further relevant information available.
	Toxicity for reproduction:	No further relevant information available.
	Other information:	Vapours have narcotic effect.

12.	Section 12. Ecological information:	
	Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.	
	Do not allow product to reach ground water, water bodies or sewage system.	
	Danger to drinking water if even small quantities leak into the ground.	
12.1.	Toxicity:	No further relevant information available.
12.2.	Persistence and degradability:	No further relevant information available.
12.3.	Bioaccumulative potential:	No further relevant information available.
12.4.	Mobility in soil:	No further relevant information available.
12.5.	Results of PBT and vPvB assessment:	
	PBT:	Not applicable

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vPvB: Not applicable
12.6. Other adverse effects: No further relevant information available.

13. Section 13. Disposal considerations:

13.1 Waste treatment methods:

Product:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Disposal must be made according to official regulations.

14. Section 14. Transport information:

14.1. Land transport:

ADR/RID-GGVS/E class: 2 5F Gases

Danger code (Kemler): -

Packaging group: -

Label: 2.1

Number UN: 1950

Description of goods: Aerosols

Remarks: "Limited quantities", LQ2

Transport category: 2

Tunnel restriction code: D

14.2. Maritime transport:

IMDG-class: 2.1

Number UN: 1950

Label: 2.1

Packaging group: -

EMS-group: F-D,S-U

Marine pollutant: No

Proper shipping name: Aerosols

14.3. Air transport:

ICAO / IATA -class: 2.1

UN/ID number: 1950

Packaging group: -

Proper shipping name: Aerosols, flammable

UN "Model Regulation": UN1950; AEROSOLS; 2.1

Special precautions for users - Waring: Gases

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

15. Section 15. Regulatory information:

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

Labelling according to law line:

The product has been labeled in accordance with EC Directives / relevant national laws.

Danger of determining components and mark to labelling:

67-64-1 Acetone, 74-98-6/106-97-8 Propane/Butane

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after burn. Do not spray on a naked flame or any incandescent material.

Labelling hazardouness:



F+ - Extremely flammable



Xi - Irritant

Numbers and word reading associated hazard R-sentences :

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- R 12 Extremely flammable.
R 36 Irritating to eyes.
R 66 Repeated exposure may cause skin dryness or cracking.
R 67 Vapours may cause drowsiness and dizziness.

Numbers and word reading associated security S-sentences:

- S 2 Keep out of the reach children.
S 16 Keep away from sources of ignition – No smoking.
S 23 Do not breathe gas / vapours .
S 24 Avoid contact with skin.
S 46 If swallowed, seek medical advice immediately and show this container or label.
S 51 Use only in well-ventilated areas.
S 56 Dispose of this material and its container at hazardous or special waste collection point.

On the packaging there is not included info in accordance with European Regulation No 1999/45/EC (chapter 2.5.).

Density: 0,780 g/cm³
VOC: 2004/42/IIB(e)(840) – 655,9 g/l

Used legislation:

- European Regulation (EC) No 1907/2006 – REACH.
Commission Regulation (EU) No 453/2010.
European Regulation No 67/548EEC and 1999/45/EC.
Commission Regulation (EC) No 1272/2006 – CLP.
Commission Regulation (EC) No 790/2009.
Regulation (EC) No 648/2004 (detergents).

15.2. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Section 16. Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant R+H phrases:

- R 10 Flammable
R 11 Highly flammable.
R 12 Extremely flammable.
R 20/21 Harmful by inhalation and in contact with skin.
R 36 Irritating to eyes.
R 38 Irritating to skin.
R 66 Repeated exposure may cause skin dryness or cracking.
R 67 Vapours may cause drowsiness and dizziness.
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement

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concerning the International
Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
MAL-Code: Måleteknisk Arbejdshygienisk Luftbehov (Regulation for the labeling concerning inhalation
hazards, Denmark)
WEL- Workplace exposure limits
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

***Compared to the last version the data has been changed.**