

Printing date 02.06.2015 Version number 43 Revision: 02.06.2015

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

- · 1.1 Product identifier
- · Trade name: CHEMISOL HEAT RESISTANT PAINT
- · Article number: CHC06020\*
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Paint
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

LUSAVOUGA, S.A.

Edificio Lusavouga - Avenida Europa, 375

3800 - 533 CACIA

Aveiro (Portugal)

351 234 915 010 | +351 234 915 015

lusavouga@lusavouga.pt | www.lusavouga.com

- · Further information obtainable from: Quality Department
- 1.4 Emergency telephone number: +31 (0)561-694400 (09:00h 17:00h)

#### SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36: Irritating to eyes.



F+; Extremely flammable

R12: Extremely flammable.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent. Warning! Pressurised container.

(Contd. on page 2)

Trade name: CHEMISOL HEAT RESISTANT PAINT

(Contd. of page 1)

Has a narcotising effect.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms







GHS02

GHS05

505 GHS07

- · Signal word Danger
- · Hazard-determining components of labelling:

butan-1-ol

acetone

aceione

n-butyl acetate

· Hazard statements

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

· Precautionary statements

P102 Keep out of reach of children.

*P260* Do not breathe spray.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

*P211* Do not spray on an open flame or other ignition source.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

*P501* Dispose of contents/container in accordance with local regulations.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.

$\alpha \mathbf{D} \alpha \mathbf{D} \mathbf{I} \alpha \mathbf{I} \alpha \mathbf{I} \alpha$	$\boldsymbol{\alpha}$	• , • /•	<i>r</i>	• 7	•
	Lownor	111/10/11/11/1	tormation	an ingrad	LOMES
SECTION 3:		444 <b>04144</b> 444			49///

- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 67-64-1	acetone	25-50%
EINECS: 200-662-2	<b>★</b> Xi R36	
Index number: 606-001-00-8	F R11	
Reg.nr.: 01-2119471330-49-xxxx	R66-67	
	♠ Flam. Liq. 2, H225	
	Eye Irrit. 2, H319; STOT SE 3, H336	

(Contd. on page 3)
GB

Trade name: CHEMISOL HEAT RESISTANT PAINT

CAS: 74-98-6	propane (Co	ntd. of page 2
EINECS: 200-827-9	F+ R12	12.3-20/0
Index number: 601-003-00-5	♠ Flam. Gas 1, H220	
Reg.nr.: 01-2119486944-21-xxxx	Press. Gas C, H280	
CAS: 106-97-8	butane	10-12.5%
EINECS: 203-448-7	▶ F+ R12	
Index number: 601-004-00-0	<b>6</b> Flam. Gas 1, H220	
Reg.nr.: 01-2119474691-32-xxxx	Press. Gas C, H280	
CAS: 75-28-5	isobutane	5-10%
EINECS: 200-857-2	<b>♦</b> F+ R12	
Index number: 601-004-00-0	<b>ⓑ</b> Flam. Gas 1, H220	
Reg.nr.: 01-2119485395-27-xxxx		
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	5-10%
EINECS: 203-603-9	R10	
Index number: 607-195-00-7	♠ Flam. Liq. 3, H226	
Reg.nr.: 01-2119475791-29-xxxx		
CAS: 123-86-4	n-butyl acetate	5-10%
EINECS: 204-658-1	R10-66-67	
Index number: 607-025-00-1	Flam. Liq. 3, H226	
Reg.nr.: 01-2119485493-29-xxxx	V	
CAS: 71-36-3	butan-1-ol	2.5-5%
EINECS: 200-751-6	<b>X</b> Xn R22	
Index number: 603-004-00-6	Xi R37/38-41	
Reg.nr.: 01-2119484630-38-xxxx		
	Flam. Liq. 3, H226 Eye Dam. 1, H318	
	Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-	
	H336	
CAS: 1330-20-7	xylene	1-2.5%
EINECS: 215-535-7	<b>X</b> Nn R20/21	
Index number: 601-022-00-9	Xi R38	
Reg.nr.: 01-2119488216-32-xxxx		
-	<b>♦</b> Flam. Liq. 3, H226	
	Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	

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

### SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact:

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

- · After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

### **SECTION 5: Firefighting measures**

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 4)

Printing date 02.06.2015 Version number 43 Revision: 02.06.2015

Trade name: CHEMISOL HEAT RESISTANT PAINT

(Contd. of page 3)

· 5.3 Advice for firefighters

· Protective equipment: No special measures required.

#### SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Keep away from ignition sources.

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/surface or ground water.

- 6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation.
- · 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.

### SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- · Information about fire and explosion protection:

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

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

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Store in a cool location.

Observe official regulations on storing packagings with pressurised containers.

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Protect from heat and direct sunlight.
- · 7.3 Specific end use(s) No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

· Ingredients with	limit values that red	quire monitoring at	the workplace:
--------------------	-----------------------	---------------------	----------------

#### 67-64-1 acetone

WEL Short-term value: 3620 mg/m³, 1500 ppm Long-term value: 1210 mg/m³, 500 ppm

#### 106-97-8 butane

WEL Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)

#### 108-65-6 2-methoxy-1-methylethyl acetate

WEL Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm

Sk

(Contd. on page 5)

Trade name: CHEMISOL HEAT RESISTANT PAINT

| 123-86-4 n-butyl acetate |
| WEL | Short-term value: 966 mg/m³, 200 ppm | Long-term value: 724 mg/m³, 150 ppm |
| WEL | Short-term value: 154 mg/m³, 50 ppm | Sk |
| 1330-20-7 xylene |
| WEL | Short-term value: 441 mg/m³, 100 ppm | Long-term value: 220 mg/m³, 50 ppm | Sk; BMGV |
| Ingredients with biological limit values: 1330-20-7 xylene |
| BMGV | 650 mmol/mol creatinine | Medium: urine

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Sampling time: post shift Parameter: methyl hippuric acid

General protective and hygienic measures.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- · Respiratory protection: Not required.
- · Protection of hands: Not required.
- · Material of gloves Not required.
- · Penetration time of glove material Not required.
- · Eye protection:



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information

· Appearance:

Form: Aerosol

Colour: According to product specification

Odour: CharacteristicOdour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

*Melting point/Melting range:* Undetermined.

**Boiling point/Boiling range:** Not applicable, as aerosol.

• Flash point:  $< 0 \, ^{\circ}C \, (< 32 \, ^{\circ}F)$ 

Not applicable, as aerosol.

(Contd. on page 6)

Printing date 02.06.2015 Version number 43 Revision: 02.06.2015

Trade name: CHEMISOL HEAT RESISTANT PAINT

	(Contd. of page
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	333 °C (631 °F)
Decomposition temperature:	Not determined.
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	1.5 Vol %
Upper:	13.0 Vol %
Vapour pressure at 20 °C (68 °F):	3500 hPa (2625 mm Hg)
Density at 20 °C (68 °F):	$0.74373 \ g/cm^3 \ (6.206 \ lbs/gal)$
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/water	r): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	96.0 %
EU-VOC:	714.2 g/l
EU-VOC in %:	96.03 %
Solids content:	6.9 %
9.2 Other information	No further relevant information available.

### SECTION 10: Stability and reactivity

- · 10.1 Reactivity
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

### SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity

	· <i>LD/LC50</i> 1	values relev	ant for classification:
	67-64-1 ac	etone	
Ī	Oral	LD50	5800 mg/kg (rat)
	Dermal	LD50	20000 mg/kg (rabbit)
	Inhalative	LC50/4 h	39 mg/m3 (rat)

(Contd. on page 7)

Printing date 02.06.2015 Version number 43 Revision: 02.06.2015

Trade name: CHEMISOL HEAT RESISTANT PAINT

		(Contd. of page 6
106-97-8 b	utane	
Inhalative	LC50 / 4 h	658000 mg/m3 (rat)
108-65-62	-methoxy-1	-methylethyl acetate
Oral	LD50	8532 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/4 h	35.7 mg/m3 (rat)
123-86-4 n	-butyl aceta	nte
Oral	LD50	10770 mg/kg (rat)
Dermal	LD50	>17600 mg/kg (rabbit)
Inhalative	LC50/4 h	>21.0 mg/m3 (rat)
71-36-3 bu	tan-1-ol	
Oral	LD50	2292 mg/kg (rat)
Dermal	LD50	3430 mg/kg (rabbit)
Inhalative	LC50/4 h	17.76 mg/m3 (rat)
1330-20-7	xylene	
Oral	LD50	3523 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h	22.1 mg/m3 (rat)

- · Primary irritant effect:
- · Skin corrosion/irritation No irritant effect.
- · Serious eye damage/irritation Irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.
- $\cdot \textit{Additional toxicological information:}$

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritant

### SECTION 12: Ecological information

· 12.1 Toxicity

Aquatic toxicity:	
67-64-1 acetone	
EC50 / 48 h	8800 mg/l (daphnia magna)
LC50 / 48 h	2262 mg/l (daphnia magna)
LC50/96 h (static)	5540 mg/l (fish)
108-65-6 2-methoxy	y-1-methylethyl acetate
EC50	408 mg/l (daphnia magna)
123-86-4 n-butyl ac	etate
EC50 / 48 h	44 mg/l (daphnia magna)
EC50/96 h	320 mg/l (algae)
LC50/24 h	205 mg/l (daphnia magna)
LC50 / 96 h	18 mg/l (Pimephales promelas)
71-36-3 butan-1-ol	
EC50 / 48 h	1328 mg/l (daphnia magna)
EC50 / 72 h	8500 mg/l (algae)
LC50/96 h	1376 mg/l (Pimephales promelas)
1330-20-7 xylene	·
EC50 / 48 h	7.4 mg/l (daphnia magna)
	(Contd. on pag

-GB

Trade name: CHEMISOL HEAT RESISTANT PAINT

LC50 / 96 h 13.5 mg/l (fish)

(Contd. of page 7)

- · 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.
- · Additional ecological information:
- · General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· 12.5 Results of PBT and vPvB assessment

- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

#### SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

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

•	Europ	ean	waste	catalogue	

08 01 11\* waste paint and varnish containing organic solvents or other dangerous substances

15 01 04 metallic packaging

- · Uncleaned packaging:
- · Recommendation: Non contaminated packagings may be recycled.

### SECTION 14: Transport information

- · 14.1 UN-Number
- · ADR, IMDG, IATA UN1950
- · 14.2 UN proper shipping name

· ADR 1950 AEROSOLS

· IMDG AEROSOLS

· IATA AEROSOLS, flammable

- · 14.3 Transport hazard class(es)
- $\cdot ADR$



- · Class 2 5F Gases.
- · Label
- · IMDG, IATA



- · Class
   · Label
   2.1
   2.1
- · 14.4 Packing group
- · ADR, IMDG, IATA Void

(Contd. on page 9)

Trade name: CHEMISOL HEAT RESISTANT PAINT

	(Contd. of	page
· 14.5 Environmental hazards:		
· Marine pollutant:	No	
· 14.6 Special precautions for user	Warning: Gases.	
· Danger code (Kemler):	-	
· EMS Number:	F- $D$ , $S$ - $U$	
· 14.7 Transport in bulk according to Anne	ex II of	
MARPOL73/78 and the IBC Code	Not applicable.	
· Transport/Additional information:		
· <i>ADR</i>		
· Limited quantities (LQ)	IL	
· Excepted quantities (EQ)	Code: E0	
	Not permitted as Excepted Quantity	
· Transport category	2	
· Tunnel restriction code	D	
· IMDG		
· Limited quantities (LQ)	1L	
· Excepted quantities (EQ)	Code: E0	
~ ~ ~ ~	Not permitted as Excepted Quantity	
· UN ''Model Regulation'':	UN1950, AEROSOLS, 2.1	

### SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

#### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### · Relevant phrases

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- R10 Flammable.
- R11 Highly flammable.
- R12 Extremely flammable.
- R20/21 Harmful by inhalation and in contact with skin.
- R22 Harmful if swallowed.
- R36 Irritating to eyes.
- R37/38 Irritating to respiratory system and skin.

(Contd. on page 10)

Trade name: CHEMISOL HEAT RESISTANT PAINT

(Contd. of page 9)

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

- · Department issuing MSDS: Quality Department
- · Contact: qualidade@lusavouga.pt
- · Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Gas 1: Flammable gases, Hazard Category 1

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas C: Gases under pressure: Compressed gas

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

\* \* Data compared to the previous version altered.

an.