SAFETY DATA SHEET

In accordance with 453/2010 and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2015-09-17

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

1.1. Product identifier

Trade name **Emaljlack**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Enamels, glazing materials, other related coatings

1.3. Details of the supplier of the safety data sheet

Company JAFO AB
Box 405
SE-227 21 Lund
Sweden

Telephone +46 46-333900

E-mail mats.willmarsson@jafo.eu

1.4. Emergency telephone number

In case of emergency contact toxicological information, emergency tel 112.

For non-emergency poison information, see http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with 1272/2008

Flammable liquids (Category 2)

Repeated exposure may cause skin dryness or cracking

Irritates eyes (Category 2)

Specific organ toxicity - Single exposure (Category 3, Narcosis effect)

2.2. Label elements

Label information in accordance with 1272/2008

Hazard pictograms

Signal words	Danger
Hazard statements	
EUH066	Repeated exposure may cause skin dryness or cracking
H225	Highly flammable liquid and vapour
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
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves and eye protection
P312	Call a doctor if you feel unwell
P501	Dispose of contents and container to authorised waste disposal facility

2.3. Other hazards

Not relevant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is composed of a homogeneous mixture of liquids.

3.2. Mixtures

Note that the table shows known hazards of the ingredients in a pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
n-BUTYL ACETATE		
CAS No 123-86-4 EC No 204-658-1 Index No 607-025-00-1	Flam Liq 3, *Skin Irrit Cron*, STOT SE 3*drow*; H226, EUH066, H336	30 - 40%
CELLULOSE NITRATE		
CAS No 9004-70-0 EC No 618-392-2	Flam Sol 1; H228	10 - 20%
ETHYL ACETATE		
CAS No 141-78-6 EC No 205-500-4 Index No 607-022-00-5	Flam Liq 2, *Skin Irrit Cron*, Eye Irrit 2, STOT SE 3*drow*; H225, EUH066, H319, H336	5 - 10%
PROPAN-2-OL		
CAS No 67-63-0 EC No 200-661-7 Index No 603-117-00-0	Flam Liq 2, Eye Irrit 2, STOT SE 3*drow*; H225, H319, H336	1 - 5%
1-METHOXY-2-PROPANOL		
CAS No 107-98-2 EC No 203-539-1 Index No 603-064-00-3	Flam Liq 3, STOT SE 3*drow*; H226, H336	1 - 5%

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complement used in the calculation of the hazards of this mixture, see Section 16b.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Generally

Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.

In case of concern, or if symptoms persist, call doctor/physician.

Upon breathing in

Allow the injured person to rest in a warm place with fresh air, if symptoms persist seek medical advice.

Upon contact with the eyes

Remove contact lenses immediately if possible.

Rinse the eye for several minutes with lukewarm water. Contact a physician.

Upon skin contact

Wash the skin with soap and water.

If symptoms occur, contact a physician.

Upon ingestion

Induce vomiting.

Contact a doctor.

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

May lead to drowsiness or grogginess. Irritates the eyes. Can cause dry or cracked skin during prolonged/frequently repeated contact.

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

Symptomatic treatment.

When contacting a physician, take this SDS with you.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

Unsuitable extinguishing agents

Among common extinguishing agents there are none that are overtly unsuitable.

5.2. Special hazards arising from the substance or mixture

The vapours may form explosive mixtures with air at room temperature.

Flammable liquid.

5.3. Advice for fire-fighters

In case of fire use a respirator mask.

Protective measures should be taken regarding other material at the site of the fire.

Cool closed containers that were exposed to fire with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use recommended safety equipment, see section 8.

Ensure good ventilation.

Do not inhale vapours and avoid contact with skin, eyes and clothes when cleaning up spill.

Keep unauthorized and unprotected people at a safe distance.

Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.

Contact rescue service in case of release of larger quantities.

6.3. Methods and material for containment and cleaning up

Absorb the liquid with an inert absorbent, vermiculite, for example. Collect the material for disposal at a waste disposal facility.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not inhale the fumes and avoid exposure to skin, eyes and clothing.

Take off work clothes and protective gear before meals.

Keep well closed.

Store this product separately from food items and keep it out of the reach of children and pets.

Do not eat, drink or smoke in premises where this product is stored.

Wash your hands after using the product.

Take precautionary measures against static discharge.

Open fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.

Remove clothes which have been splattered.

Store in a well-ventilated and locked place.

7.2. Conditions for safe storage, including any incompatibilities

Handle in a premises which is well ventilated.

7.3. Specific end uses

See identified uses in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. National limit values, United Kingdom

n-BUTYL ACETATE

Time-weighted-average exposure limit (TWA) 150 ppm / 724 mg/m^3 Short term exposure limit (STEL) 200 ppm / 966 mg/m^3

ETHYL ACETATE

Time-weighted-average exposure limit (TWA) 200 ppm Short term exposure limit (STEL) 400 ppm

PROPAN-2-OL

Time-weighted-average exposure limit (TWA) 400 ppm / 999 mg/m^3 Short term exposure limit (STEL) 500 ppm / 1250 mg/m^3

1-METHOXY-2-PROPANOL

Time-weighted-average exposure limit (TWA) 100 ppm / 375 mg/m^3 Short term exposure limit (STEL) 150 ppm / 560 mg/m^3 Anm. Sk

Other ingredients (cf. Section 3) have no occupational exposure limit values.

8.2. Exposure controls

In terms of minimizing risks, attention must be paid to both the physical and health hazards (see Sections 2, 10 and 11) of this product according to EU directives 89/391 and 98/24 and national occupational legislation.

Use protective glasses, safety goggles, or a visor.

Use protective gloves of butyl rubber, Viton or fluorine rubber, or get advice from an occupational medical expert about alternative materials. Show this safety data sheet.

A protective skin cream is recommended.

Use proper protective breathing equipment in case of insufficient ventilation.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a)	Appearance	Form: liquid Colour: white
b)	Odour	Characteristic
c)	Odour threshold	Not applicable
d)	pH	Not applicable
e)	Melting point/freezing point	Not applicable
f)	Initial boiling point and boiling range	125 °C at atmospheric pressure (101325 Pa)
g)	Flash point	-1 °C
h)	Evaporation rate	Not applicable
i)	Flammability (solid, gas)	Not applicable
j)	Upper/lower flammability or explosive limits	Lower explosion limit 2.5% Upper explosion limit 11.5%
k)	Vapour pressure	Not applicable
l)	Vapour density	Not applicable
m)	Relative density	1.06 kg/L
n)	Solubility	Solubility in water: Miscible
o)	Partition coefficient: n-octanol/water	Not applicable
p)	Auto-ignition temperature	300 °C
q)	Decomposition temperature	Not applicable
r)	Viscosity	Not applicable
s)	Explosive properties	Not applicable
t)	Oxidising properties	Not applicable

9.2. Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.

Reacts with strong oxidising agents.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.

10.5. Incompatible materials

Avoid contact with oxidizers.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

General or unspecific toxicity

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute effects

Not classified as an acutely toxic substance.

Harmfulness

The product is not classified as harmful to health.

Repeated dose toxicity

To the best of our knowledge, no chronic effects have been reported for this product.

Carcinogenicity

To the best of our knowledge, no carcinogenic effects have been reported for this product.

CMR effects

To the best of our knowledge, no mutagenic or otherwise genetic or reproductive toxic effects have been reported for this product.

Sensibilisation

As far as we know no hypersensitivity reactions have been reported for this product.

Corrosive and irritating effects

Can cause dry or cracked skin during prolonged/frequently repeated contact.

Eye contact may cause burning pain or irritation.

Synergism and antagonism

No information is available.

Effect on judgement and other psychological effects

Anaesthetic or narcotic effect.

Effect on human microflora

No known effect on the micro flora in humans.

Relevant toxicological properties

n-BUTYL ACETATE

LD50 rabbit (Dermally) 24h > 17600 mg/kg

LC50 rat (Inhalation) 4h = 40 mg/l

LD50 Mouse (Orally) 24h = 6000 mg/kg

LD50 rabbit (Orally) 24h = 3200 mg/kg

LD50 rat (Orally) 24h = 10768 mg/kg oral

ETHYL ACETATE

LD50 rabbit (Dermally) 24h > 18000 mg/kg dermal

LC50 rat (Inhalation) 1h = 200 mg/L inhalation

LC50 rat (Inhalation) 8h = 5.86 mg/L inhalation

LD50 rat (Orally) 24h = 5620 mg/kg oral

PROPAN-2-OL

LD50 rabbit (Dermally) 24h = 15800 mg/kg

LD50 rat (Dermally) 24h > 12800 mg/kg

LC50 rat (Inhalation) 4h = 72.6 mg

LC50 rat (Inhalation) 4h = 64000 ppmV

LC50 rat (Inhalation) 8h = 16000 ppmV

LD50 rat (Orally) 24h = 5045 mg/kg

1-METHOXY-2-PROPANOL

LD50 rat (Dermally) 24h = 13500 mg/kg

LD50 rat (Orally) 24h = 5000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

n-BUTYL ACETATE

LC50 fathead minnow (Pimephales promelas) 96h = 18 mg/l
LC50 Ide (Leuciscus idus) 96h = 62 mg/l
EC50 Freshwater water flea (Daphnia magna) 48 h 10 - 100 mg/l
EC50 Freshwater water flea (Daphnia magna) 24h = 73 mg/l
IC50 Algae 72h = 670 mg/l

ETHYL ACETATE

LC50 Freshwater water flea (Daphnia magna) 48h = 717 mg/L
LC50 Fish 96h = 230 mg/L
IC50 Algae 72h = 3300 mg/L

PROPAN-2-OL

LC50 fathead minnow (Pimephales promelas) 96h = 9640 mg/L
LC50 Freshwater water flea (Daphnia magna) 48h = 2285 mg/L
EC50 Freshwater water flea (Daphnia magna) 48 h = 13299 mg/l
LC50 Fish 96h = 1000 mg/l
EC50 Freshwater water flea (Daphnia magna) 24h 10 - 100 mg/l
EC50 Algae 24h 1 - 10 mg/l

Prevent release on land, in water and drains.

No ecological damage is known or expected in the event of normal use.

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

No chemical safety report has been executed.

12.6. Other adverse effects

Not indicated

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste handling for the product

The product is flammable and its waste shall therefore, if it is not treated in order to eliminate this risk, be considered to be dangerous.

Not completely empty packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely empty packaging can be recycled.

Avoid discharge into sewers.

May not be disposed of with household waste.

Observe local regulations.

Classification according to 2006/12

Recommended LoW-code: 08 01 11 Waste paint and varnish containing organic solvents or other dangerous substances.

Recycling of the product

Empty, rinsed packaging is sent for recycling where practicable.

SECTION 14: TRANSPORT INFORMATION

This product is only supposed to be transported by road or railway and just the transport regulations ADR/RID thus apply. If other means of transport are to be used, contact the publisher of this safety data sheet.

14.1. UN number

1263

14.2. UN proper shipping name

PAINT (CELLULOSE NITRATE, ETHYL ACETATE, PROPAN-2-OL)

14.3. Transport hazard class(es)

Class

3: Flammable liquids

Classification code (ADR/RID)

F1: Flammable liquids having a flash-point of or below 60 °C

Subsidiary risk (IMDG)

Labels

14.4. Packing group

Packing group: II

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: D/E.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

14.8 Other transport information

Transport category: 2; Highest total quantity per transported unit 333 kg or liters.

SECTION 15: REGULATORY INFORMATION

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

Not applicable.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: OTHER INFORMATION

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the first version.

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

Flam Liq 3	Flammable liquids (Category 3)
Skin Irrit Cron	Repeated exposure may cause skin dryness or cracking
STOT SE 3*drow*	Specific organ toxicity - Single exposure (Category 3, Narcosis effect)
Flam Sol 1	Flammable solid unknown form (Category 1)
Flam Liq 2	Flammable liquids (Category 2)
Eye Irrit 2	Irritates eyes (Category 2)
No environmental hazard	Not classified as being environmentally hazardous

Comprehensive definition of the hazards mentioned in Section 2

Flam Liq 2

Flash point < 23 °C and initial boiling point > 35 °C; Flammable liquid Category 2

Skin Irrit Cron

Substances and mixtures which may cause concern as a result of skin dryness, flaking or cracking but which do not meet the criteria for skin irritancy, based on either: practical observations; or relevant evidence concerning their predicted effects on the skin

Eye Irrit 2

If, when applied to the eye of an animal, a substance produces at least in 2 of 3 tested animals, a positive response of:
- corneal opacity >= 1 and/or
- iritis >= 1, and/or
- conjunctival redness >= 2 and/or
- conjunctival oedema (chemosis) >= 2

calculated as the mean scores following grading at 24, 48 and 72 hours after installation of the test material, and which fully reverses within an observation period of 21 days

STOT SE 3*drow*

Transient target organ effects: Narcotic effects. These are target organ effects for which a substance does not meet the criteria to be classified in Categories 1 or 2. These are effects which adversely alter human function for a short duration after exposure and from which humans may recover in a reasonable period without leaving significant alteration of structure or function

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

Tunnel restriction code: D/E; Transport by bulk or via tank: Passage forbidden through tunnels of category D and E, Other transportation means: Passage forbidden through tunnels of category E.

Transport category: 2; Highest total quantity per transported unit 333 kg or liters.

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I , as updated to 2015-09-22.

Where such data was lacking, on the second hand the documentation on which this official classification is based was used, e.g. IUCLID (International Uniform Chemical Information Database). On the third hand, information was used from reputable international chemical suppliers, and on the fourth hand from other available information, e.g. safety data sheets from other suppliers or information from non-profit associations, whereby the reliability of the source was judged by an expert. If, in spite of this, reliable information was not found, the hazards were judged by expert opinions based on the known properties of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

453/2010	COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
1272/2008	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
89/391	COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
98/24	COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)
2006/12	DIRECTIVE 2006/12/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2006 on waste
1907/2006	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 Annex I

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

The calculation of the hazards of this mixture has been performed as an evaluation by applying a weight of evidence determination using expert judgement in accordance with 1272/2008 Annex I, weighing all available information having a bearing on the determination of the hazards of the mixture, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

Full texts for hazard statements mentioned in section 3

H226	Flammable liquid and vapour
EUH066	Repeated exposure may cause skin dryness or cracking
H336	May cause drowsiness or dizziness
H228	Flammable solid

H225 Highly flammable liquid and vapour

H319 Causes serious eye irritation

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

This product can cause injuries if not used properly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

Other relevant information

Editorial information

This safety data sheet has been generated by the program KemRisk®, KemRisk Sweden AB, Teknikringen 10, SE-583 30 Linköping, Sweden, www.kemrisk.se