



## Safety Data Sheet

### HEAT RESISTANT PAINT ALUMINIUM

Safety Data Sheet dated 2/10/2023, version 1 2/10/2023

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

- 1.1. Product identifier  
Mixture identification:  
Trade name: HEAT RESISTANT PAINT ALUMINIUM
- 1.2. Relevant identified uses of the substance or mixture and uses advised against  
Recommended use:  
Spray Paint
- 1.3. Details of the supplier of the safety data sheet  
Company:  
COLORPACK s.r.l.  
Via B.Cellini 26  
20020 Solaro  
Milano - Italia  
Fax +39 029691714 Tel.+39 029690664 (8.30-17.00 from monday to friday)  
Web site: [www.colorpack.com](http://www.colorpack.com) E-mail: [info@colorpack.com](mailto:info@colorpack.com)  
Competent person responsible for the safety data sheet:  
[sharon@colorpack.com](mailto:sharon@colorpack.com)
- 1.4. Emergency telephone number  
COLORPACK s.r.l. Tel.+39 029690664 (8.30-17.00 from monday to friday)  
Centro Antiveleni - Milano - A.O. Ospedale Niguarda Ca' Granda - Piazza Ospedale Maggiore, 3 - Tel. 02 66101029  
Centro Antiveleni - Bergamo - A.O. Papa Giovanni XXIII - Piazza OMS, 1 - Tel. 800.883.300  
Centro Antiveleni - Pavia - Centro Nazionale di Informazione Tossicologica - Via Salvatore Maugeri, 10 - Tel. 0382 24444  
Centro Antiveleni - Roma - Policlinico "A. Gemelli" - Largo A.Gemelli, 8 - Tel. 06 3054343  
Centro Antiveleni - Roma - Policlinico "Umberto I" - Viale del Policlinico, 155 - Tel. 06 49978000  
Centro Antiveleni pediatrico - Roma - "Ospedale Pediatrico Bambino Gesù" DEA - Piazza S.Onofrio, 4 - Tel. 06 68593726  
Centro Antiveleni - Napoli - A.O. di Rilievo Nazionale "A.Cardarelli" - Via A.Cardarelli, 9 - Tel. 081 5453333  
Centro Antiveleni - Firenze - A.O. "Careggi" U.O. Tossicologia Medica - Largo Brambilla, 3 - Tel. 055 7947819  
Centro Antiveleni - Foggia - A.O. Universitaria - V.le Luigi Pinto, 1 - Tel. 800.183.459 / 0881 736003  
Centro Antiveleni - Azienda Ospedaliera Universitaria Integrata (AOUI) di Verona - Piazzale Aristide Stefani, 1 - Tel. 800.011.858

#### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture  
EC regulation criteria 1272/2008 (CLP)  
⚠ Danger, Aerosols 1, Extremely flammable aerosol. Pressurized container: may burst if heated.  
⚠ Warning, Eye Irrit. 2, Causes serious eye irritation.  
⚠ Warning, Skin Sens. 1A, May cause an allergic skin reaction.  
⚠ Warning, STOT SE 3, May cause drowsiness or dizziness.  
EUH066 Repeated exposure may cause skin dryness or cracking.  
Adverse physicochemical, human health and environmental effects:  
No other hazards
- 2.2. Label elements  
Hazard pictograms:

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Danger

Hazard statements:

H222, H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

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.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves and eye 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.

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

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains

acetone; propan-2-one; propanone

n-butyl acetate

isobutyl acetate

Condensation products of dimerised fatty acids, C18-unsaturated, with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$

Other Hazards:

No other hazards

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### SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

$\geq 30\%$  -  $< 40\%$  acetone; propan-2-one; propanone

REACH No.: 01-2119471330-49, Index number: 606-001-00-8, CAS: 67-64-1, EC: 200-662-2

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H336

EUH066

$\geq 15\%$  -  $< 20\%$  propane

REACH No.: 01-2119486944-21, Index number: 601-003-00-5, CAS: 74-98-6, EC: 200-827-9

⚠ 2.2/1A Flam. Gas 1A H220

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◇ 2.5 Press. Gas H280  
DECLK (CLP)\*

>= 5% - < 7% n-butyl acetate  
REACH No.: 01-2119485493-29, Index number: 607-025-00-1, CAS: 123-86-4, EC: 204-658-1

◇ 2.6/3 Flam. Liq. 3 H226  
◇ 3.8/3 STOT SE 3 H336  
EUH066

>= 5% - < 7% butane  
REACH No.: 01-2119474691-32, Index number: 601-004-00-0, CAS: 106-97-8, EC: 203-448-7

◇ 2.2/1A Flam. Gas 1A H220  
◇ 2.5 Press. Gas H280  
DECLK (CLP)\*

>= 3% - < 5% Talc  
REACH No.: 01-2120140278-58, CAS: 14807-96-6, EC: 238-877-9  
Substance with a Union workplace exposure limit.

>= 3% - < 5% Calcium carbonate  
CAS: 1317-65-3, EC: 215-279-6  
Substance with a Union workplace exposure limit.

>= 2.5% - < 3% isobutane  
REACH No.: 01-2119485395-27, Index number: 601-004-00-0, CAS: 75-28-5, EC: 200-857-2

◇ 2.2/1A Flam. Gas 1A H220  
◇ 2.5 Press. Gas H280  
DECLK (CLP)\*

>= 2.5% - < 3% reaction mass of ethylbenzene and xylene  
REACH No.: 01-2119539452-40, EC: 905-588-0

◇ 2.6/3 Flam. Liq. 3 H226  
◇ 3.1/4/Dermal Acute Tox. 4 H312  
◇ 3.1/4/Inhal Acute Tox. 4 H332  
◇ 3.10/1 Asp. Tox. 1 H304  
◇ 3.2/2 Skin Irrit. 2 H315  
◇ 3.3/2 Eye Irrit. 2 H319  
◇ 3.8/3 STOT SE 3 H335  
◇ 3.9/2 STOT RE 2 H373

Specific Concentration Limits:  
C >= 10%: STOT RE 2 H373

>= 2.5% - < 3% 2-butoxyethanol; ethylene glycol monobutyl ether  
REACH No.: 01-2119475108-36, Index number: 603-014-00-0, CAS: 111-76-2, EC: 203-905-0

◇ 3.1/3/Inhal Acute Tox. 3 H331  
◇ 3.1/4/Oral Acute Tox. 4 H302  
◇ 3.2/2 Skin Irrit. 2 H315  
◇ 3.3/2 Eye Irrit. 2 H319

Acute Toxicity Estimate:  
ATE - Oral 1200 mg/kg bw  
ATE - Inhalation (Vapours) 3 mg/l

>= 2.5% - < 3% aluminium powder (stabilised)

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REACH No.: 01-2119529243-45, Index number: 013-002-00-1, CAS: 7429-90-5, EC: 231-072-3

⚠ 2.12/2 Water-react. 2 H261

⚠ 2.7/1 Flam. Sol. 1 H228

>= 1% - < 2.5% isobutyl acetate

REACH No.: 01-2119488971-22, Index number: 607-026-00-7, CAS: 110-19-0, EC: 203-745-1

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.8/3 STOT SE 3 H336

EUH066

>= 1% - < 2.5% xylene (mixture of isomers)

REACH No.: 01-2119488216-32, Index number: 601-022-00-9, CAS: 1330-20-7, EC: 215-535-7

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.10/1 Asp. Tox. 1 H304

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H335

⚠ 3.9/2 STOT RE 2 H373

⚠ 3.2/2 Skin Irrit. 2 H315

⚠ 3.1/4/Dermal Acute Tox. 4 H312

⚠ 3.1/4/Inhal Acute Tox. 4 H332

4.1/C3 Aquatic Chronic 3 H412

>= 0.5% - < 1% Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

REACH No.: 01-2119457273-39, Index number: 649-327-00-6, EC: 918-481-9

⚠ 3.10/1 Asp. Tox. 1 H304

EUH066

>= 0.5% - < 1% ethylbenzene

REACH No.: 01-2119489370-35, Index number: 601-023-00-4, CAS: 100-41-4, EC: 202-849-4

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.1/4/Inhal Acute Tox. 4 H332

⚠ 3.9/2 STOT RE 2 H373

⚠ 3.10/1 Asp. Tox. 1 H304

>= 0.5% - < 1% Hydrocarbons, C9, aromatics

REACH No.: 01-2119455851-35, CAS: 128601-23-0, EC: 918-668-5

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.8/3 STOT SE 3 H335

⚠ 3.10/1 Asp. Tox. 1 H304

⚠ 3.8/3 STOT SE 3 H336

⚠ 4.1/C2 Aquatic Chronic 2 H411

EUH066

>= 0.1% - < 0.25% Condensation products of dimerised fatty acids, C18-unsaturated, with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine

REACH No.: 01-2119970640-38, CAS: 162627-17-0, EC: 605-296-0

⚠ 3.4.2/1A Skin Sens. 1A H317

>= 0.1% - < 0.25% Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

REACH No.: 01-2119463258-33, CAS: 64742-48-9, EC: 919-857-5

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.10/1 Asp. Tox. 1 H304

⚠ 3.8/3 STOT SE 3 H336

EUH066

943 ppm 1-methoxy-2-propanol; monopropylene glycol methyl ether

REACH No.: 01-2119457435-35, Index number: 603-064-00-3, CAS: 107-98-2, EC: 203-539-1

⚠ 2.6/3 Flam. Liq. 3 H226

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⚠ 3.8/3 STOT SE 3 H336

320 ppm propan-2-ol; isopropyl alcohol; isopropanol

REACH No.: 01-2119457558-25, Index number: 603-117-00-0, CAS: 67-63-0, EC: 200-661-7

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H336

280 ppm trans-1,3,3,3-Tetrafluoroprop-1-ene

REACH No.: 01-0000019758-54, CAS: 1645-83-6, EC: 471-480-0

⚠ 2.5/C Press Gas (Comp.) H280

193 ppm methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate

REACH No.: 01-2119452498-28, Index number: 607-035-00-6, CAS: 80-62-6, EC: 201-297-1

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.8/3 STOT SE 3 H335

⚠ 3.2/2 Skin Irrit. 2 H315

⚠ 3.4.2/1 Skin Sens. 1 H317

154 ppm n-butyl methacrylate

REACH No.: 01-2119486394-28, Index number: 607-033-00-5, CAS: 97-88-1, EC: 202-615-1

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H335

⚠ 3.2/2 Skin Irrit. 2 H315

⚠ 3.4.2/1 Skin Sens. 1 H317

105 ppm 2-methoxy-1-methylethyl acetate

REACH No.: 01-2119475791-29, Index number: 607-195-00-7, CAS: 108-65-6, EC: 203-603-9

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.8/3 STOT SE 3 H336

22 ppm methanol

REACH No.: 01-2119433307-44, Index number: 603-001-00-X, CAS: 67-56-1, EC: 200-659-6

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.8/1 STOT SE 1 H370

⚠ 3.1/3/Oral Acute Tox. 3 H301

⚠ 3.1/3/Dermal Acute Tox. 3 H311

⚠ 3.1/3/Inhal Acute Tox. 3 H331

Specific Concentration Limits:

C >= 10%: STOT SE 1 H370

3% <= C < 10%: STOT SE 2 H371

\*DECLK (CLP): Substance classified in accordance with Note K, Annex VI of EC Regulation (EC) 1272/2008. The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w 1,3- butadiene (Einecs No 203-450-8), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P210-P403 shall apply.

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#### SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

1.801.ALL HT/1

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Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

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#### SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

The heat causes an increase in pressure inside the container with danger of bursting. In case of fire the aerosols bursting can be projected to distance with violence, with risk of propagation of the fire.

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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#### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

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#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

##### 7.2. Conditions for safe storage, including any incompatibilities

Vapours are more weighty than air. Vapours may form explosive mixture with air.

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

| Product belongs to category: | Lower-tier threshold (tonnes) | Upper-tier threshold (tonnes) |
|------------------------------|-------------------------------|-------------------------------|
| P3a                          | 150                           | 500                           |

##### 7.3. Specific end use(s)

None in particular

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

##### 8.1. Control parameters

acetone; propan-2-one; propanone - CAS: 67-64-1

EU - TWA(8h): 1210 mg/m<sup>3</sup>, 500 ppm

ACGIH - TWA(8h): 250 ppm - STEL: 500 ppm - Notes: A4, BEI - URT and eye irr, CNS impair

MAK - TWA(8h): 1200 mg/m<sup>3</sup>, 500 ppm - STEL: 2400 mg/m<sup>3</sup>, 1000 ppm - Notes: SWISS

National - TWA(8h): 1210 mg/m<sup>3</sup>, 500 ppm - STEL: 3620 mg/m<sup>3</sup>, 1500 ppm - Notes: HR - CROATIA

propane - CAS: 74-98-6

EU - TWA(8h): 1800 mg/m<sup>3</sup>, 1000 ppm

TLV - TWA(8h): 1800 mg/m<sup>3</sup>, 1000 ppm - STEL: 3600 mg/m<sup>3</sup>, 2000 ppm - Notes: AUSTRIA, DENMARK

TLV - TWA(8h): 1500 mg/m<sup>3</sup>, 800 ppm - STEL: 2000 mg/m<sup>3</sup>, 1100 ppm - Notes: FINLAND

TLV - TWA(8h): 1400 mg/m<sup>3</sup>, 778 ppm - STEL: 1800 mg/m<sup>3</sup>, 1000 ppm - Notes: ROMANIA

TLV - TWA(8h): 1800 mg/m<sup>3</sup>, 1000 ppm - STEL: 7200 mg/m<sup>3</sup>, 4000 ppm - Notes: GERMANY

MAK - TWA(8h): 1800 mg/m<sup>3</sup>, 1000 ppm - STEL: 7200 mg/m<sup>3</sup>, 4000 ppm - Notes: SWISS

ACGIH - Notes: (D, EX) - Asphyxia



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n-butyl acetate - CAS: 123-86-4

ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

MAK - TWA(8h): 480 mg/m<sup>3</sup>, 100 ppm - STEL: 960 mg/m<sup>3</sup>, 200 ppm - Notes:

GERMANY

GVI - TWA(8h): 724 mg/m<sup>3</sup>, 150 ppm - STEL: 966 mg/m<sup>3</sup>, 200 ppm - Notes: CROATIA

VLA - TWA(8h): 724 mg/m<sup>3</sup>, 150 ppm - STEL: 965 mg/m<sup>3</sup>, 200 ppm - Notes: SPAIN

TLV - TWA(8h): 950 mg/m<sup>3</sup> - STEL: 1200 mg/m<sup>3</sup> - Notes: CZECH REPUBLIC

VLEP - TWA(8h): 710 mg/m<sup>3</sup>, 150 ppm - STEL: 940 mg/m<sup>3</sup>, 200 ppm - Notes: FRANCE

National - TWA(8h): 724 mg/m<sup>3</sup>, 150 ppm - STEL: 966 mg/m<sup>3</sup>, 200 ppm - Notes:

UNITED KINGDOM

MAK - TWA(8h): 480 mg/m<sup>3</sup>, 100 ppm - STEL: 960 mg/m<sup>3</sup>, 200 ppm - Notes: SWISS

EU - TWA(8h): 241 mg/m<sup>3</sup>, 50 ppm - STEL: 723 mg/m<sup>3</sup>, 150 ppm

butane - CAS: 106-97-8

EU - TWA(8h): 1450 mg/m<sup>3</sup>, 600 ppm - STEL: 1810 mg/m<sup>3</sup>, 750 ppm

TLV - TWA(8h): 1600 mg/m<sup>3</sup>, 800 ppm - STEL: 3800 mg/m<sup>3</sup>, 1600 ppm - Notes:

AUSTRIA, DENMARK

TLV - TWA(8h): 1900 mg/m<sup>3</sup>, 800 ppm - STEL: 2400 mg/m<sup>3</sup>, 1000 ppm - Notes:

FINLAND

TLV - TWA(8h): 1900 mg/m<sup>3</sup>, 800 ppm - Notes: FRANCE

TLV - TWA(8h): 2400 mg/m<sup>3</sup>, 1000 ppm - STEL: 9600 mg/m<sup>3</sup>, 4000 ppm - Notes:

GERMANY

MAK - TWA(8h): 1900 mg/m<sup>3</sup>, 800 ppm - STEL: 7600 mg/m<sup>3</sup>, 3200 ppm - Notes:

SWISS

ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair

Talc - CAS: 14807-96-6

EU - TWA(8h): 2 mg/m<sup>3</sup>

MAK - TWA(8h): 2 mg/m<sup>3</sup> - Notes: CH - SWISS

ACGIH - TWA(8h): 2 mg/m<sup>3</sup> - Notes: Containing no asbestos fibers. (E,R), A4 - Pulm fibrosis, pulm func

Calcium carbonate - CAS: 1317-65-3

EU - TWA(8h): 10 mg/m<sup>3</sup> - STEL(8h): 3 mg/m<sup>3</sup>

isobutane - CAS: 75-28-5

EU - TWA(8h): 2400 mg/m<sup>3</sup>, 1000 ppm - STEL: 9600 mg/m<sup>3</sup>, 4000 ppm

TLV - TWA(8h): 1900 mg/m<sup>3</sup>, 800 ppm - STEL: 2400 mg/m<sup>3</sup>, 1000 ppm - Notes:

FINLAND

MAK - TWA(8h): 1900 mg/m<sup>3</sup>, 800 ppm - STEL: 7600 mg/m<sup>3</sup>, 3200 ppm - Notes:

SWISS

ACGIH - STEL: 1000 ppm - Notes: (EX) - CNS impair

reaction mass of ethylbenzene and xylene

EU - TWA(8h): 221 mg/m<sup>3</sup>, 50 ppm - STEL: 442 mg/m<sup>3</sup>, 100 ppm - Notes: Bold-type:

Indicative Occupational Exposure Limit Values [2,3] and Limit Values for Occupational Exposure [4] (for references see bibliography)

ACGIH - TWA(8h): 100 ppm - STEL: 150 ppm - Notes: A4, BEI - URT and eye irr, CNS impair

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

EU - TWA(8h): 98 mg/m<sup>3</sup>, 20 ppm - STEL: 246 mg/m<sup>3</sup>, 50 ppm - Notes: Skin

ACGIH - TWA(8h): 20 ppm - Notes: A3, BEI - Eye and URT irr

MAK - TWA(8h): 49 mg/m<sup>3</sup>, 10 ppm - STEL: 98 mg/m<sup>3</sup>, 20 ppm - Notes: SWISS

MAK - TWA(8h): 98 mg/m<sup>3</sup>, 20 ppm - STEL(): 200 mg/m<sup>3</sup>, 40 ppm - Notes: AUSTRIA

TLV - TWA(8h): 100 mg/m<sup>3</sup> - STEL(): 200 mg/m<sup>3</sup> - Notes: CZECH REPUBLIC

MAK - TWA(8h): 49 mg/m<sup>3</sup>, 10 ppm - STEL(): 98 mg/m<sup>3</sup>, 20 ppm - Notes: GERMANY

VLEP - TWA(8h): 49 mg/m<sup>3</sup>, 10 ppm - STEL(): 246 mg/m<sup>3</sup>, 50 ppm - Notes: FRANCE

National - TWA(8h): 123 mg/m<sup>3</sup>, 25 ppm - STEL(): 246 mg/m<sup>3</sup>, 50 ppm - Notes: UNITED KINGDOM: Skin

National - TWA(8h): 98 mg/m<sup>3</sup>, 20 ppm - STEL(): 245 mg/m<sup>3</sup>, 50 ppm - Notes: SPAIN

aluminium powder (stabilised) - CAS: 7429-90-5

ACGIH - TWA(8h): 1 mg/m<sup>3</sup> - Notes: (R), A4 - Pneumoconiosis, LRT irr, neurotoxicity

MAK - TWA(8h): 3 mg/m<sup>3</sup> - Notes: SWISS



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VLA - TWA(8h): 10 mg/m<sup>3</sup> - Notes: SPAIN

isobutyl acetate - CAS: 110-19-0

ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr

MAK - TWA(8h): 480 mg/m<sup>3</sup>, 100 ppm - STEL: 960 mg/m<sup>3</sup>, 200 ppm - Notes: SWISS

GVI - TWA(8h): 724 mg/m<sup>3</sup>, 150 ppm - STEL: 903 mg/m<sup>3</sup>, 187 ppm - Notes: CROATIA

VLA - TWA(8h): 724 mg/m<sup>3</sup>, 150 ppm - Notes: SPAIN

TLV - TWA(8h): 950 mg/m<sup>3</sup> - STEL: 1200 mg/m<sup>3</sup> - Notes: CZECH REPUBLIC

National - TWA(8h): 300 mg/m<sup>3</sup>, 62 ppm - STEL: 600 mg/m<sup>3</sup>, 124 ppm - Notes: GERMANY

VLEP - TWA(8h): 710 mg/m<sup>3</sup>, 150 ppm - STEL: 940 mg/m<sup>3</sup>, 200 ppm - Notes: FRANCE

EU - TWA(8h): 241 mg/m<sup>3</sup>, 50 ppm - STEL: 723 mg/m<sup>3</sup>, 150 ppm

xylene (mixture of isomers) - CAS: 1330-20-7

EU - TWA(8h): 221 mg/m<sup>3</sup>, 50 ppm - STEL: 442 mg/m<sup>3</sup>, 100 ppm - Notes: Skin

ACGIH - TWA(8h): 20 ppm - Notes: A4, BEI - URT and eye irr; hematologic eff; CNS impair

MAK - TWA(8h): 435 mg/m<sup>3</sup>, 100 ppm - STEL: 870 mg/m<sup>3</sup>, 200 ppm - Notes: CH - SWISS

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics - Index number: 649-327-00-6

EU - TWA(8h): 1200 mg/m<sup>3</sup>

ethylbenzene - CAS: 100-41-4

EU - TWA(8h): 442 mg/m<sup>3</sup>, 100 ppm - STEL: 884 mg/m<sup>3</sup>, 200 ppm - Notes: Skin

ACGIH - TWA(8h): 20 ppm - Notes: OTO; A3, BEI - URT & eye irr; ototoxicity; kidney eff; CNS impair

MAK - TWA(8h): 220 mg/m<sup>3</sup>, 50 ppm - STEL: 220 mg/m<sup>3</sup>, 50 ppm - Notes: SWISS

National - TWA(8h): 442 mg/m<sup>3</sup>, 100 ppm - STEL: 884 mg/m<sup>3</sup>, 200 ppm - Notes: CROATIA - K (Skin)

Hydrocarbons, C9, aromatics - CAS: 128601-23-0

ACGIH - TWA(8h): 100 mg/m<sup>3</sup>, 19 ppm

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics - CAS: 64742-48-9

ACGIH - TWA(8h): 1200 mg/m<sup>3</sup>, 197 ppm

MAK - TWA(8h): 300 mg/m<sup>3</sup>, 50 ppm - STEL: 600 mg/m<sup>3</sup>, 100 ppm - Notes: CH - SWISS

NIOSH - TWA: 350 mg/m<sup>3</sup> - STEL: 1800 mg/m<sup>3</sup>

OSHA - TWA: 2900 mg/m<sup>3</sup>, 500 ppm - Notes: USA - UNITED STATES

National - TWA: 300 mg/m<sup>3</sup> - STEL: 900 mg/m<sup>3</sup> - Notes: PL - POLAND

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

EU - TWA(8h): 375 mg/m<sup>3</sup>, 100 ppm - STEL: 563 mg/m<sup>3</sup>, 150 ppm - Notes: Skin

ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: A4 - Eye and URT irr

MAK - TWA(8h): 360 mg/m<sup>3</sup>, 100 ppm - STEL: 720 mg/m<sup>3</sup>, 200 ppm - Notes: CH - SWISS

MAK - TWA(8h): 187 mg/m<sup>3</sup>, 50 ppm - STEL(): 187 mg/m<sup>3</sup>, 50 ppm - Notes: AT - AUSTRIA

TLV - TWA(8h): 270 mg/m<sup>3</sup> - STEL(): 550 mg/m<sup>3</sup> - Notes: CZ - CZECH REP.

MAK - TWA(8h): 370 mg/m<sup>3</sup>, 100 ppm - STEL(): 740 mg/m<sup>3</sup>, 200 ppm - Notes: DE - GERMANY

VLEP - TWA(8h): 188 mg/m<sup>3</sup>, 50 ppm - STEL(): 375 mg/m<sup>3</sup>, 10 ppm - Notes: FR - FRANCE

GVI - TWA(8h): 375 mg/m<sup>3</sup>, 100 ppm - STEL: 568 mg/m<sup>3</sup>, 150 ppm - Notes: HR - CROATIA: K (Skin)

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr, CNS impair

MAK - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL: 1000 mg/m<sup>3</sup>, 400 ppm - Notes: SWISS

GVI - TWA(8h): 999 mg/m<sup>3</sup>, 400 ppm - STEL: 1250 mg/m<sup>3</sup>, 500 ppm - Notes: CROATIA

VLA - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL: 1000 mg/m<sup>3</sup>, 440 ppm - Notes: SPAIN - VLB, s

TLV - TWA(8h): 500 mg/m<sup>3</sup> - STEL: 1000 mg/m<sup>3</sup> - Notes: CZECH REPUBLIC

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MAK - TWA(8h): 500 mg/m<sup>3</sup>, 200 ppm - STEL: 1000 mg/m<sup>3</sup>, 400 ppm - Notes: GERMANY  
VLEP - STEL: 980 mg/m<sup>3</sup>, 400 ppm - Notes: FRANCE  
National - TWA(8h): 999 mg/m<sup>3</sup>, 400 ppm - STEL: 1250 mg/m<sup>3</sup>, 500 ppm - Notes: UNITED KINGDOM  
trans-1,3,3,3-Tetrafluoroprop-1-ene - CAS: 1645-83-6  
EU - TWA(8h): 4700 mg/m<sup>3</sup>, 1000 ppm - STEL: 9400 mg/m<sup>3</sup>, 2000 ppm  
MAK - TWA(8h): 4700 mg/m<sup>3</sup>, 1000 ppm - STEL: 9400 mg/m<sup>3</sup>, 2000 ppm - Notes: SWISS  
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate - CAS: 80-62-6  
EU - TWA(8h): 50 ppm - STEL: 100 ppm  
ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: DSEN, A4 - URT and eye irr, body weight eff, pulm edema  
MAK - TWA(8h): 210 mg/m<sup>3</sup>, 50 ppm - STEL: 420 mg/m<sup>3</sup>, 100 ppm - Notes: CH - SWISS  
2-methoxy-1-methylethyl acetate - CAS: 108-65-6  
EU - TWA(8h): 275 mg/m<sup>3</sup>, 50 ppm - STEL: 550 mg/m<sup>3</sup>, 100 ppm - Notes: Skin  
MAK - TWA(8h): 275 mg/m<sup>3</sup>, 50 ppm - STEL: 275 mg/m<sup>3</sup>, 50 ppm - Notes: SWISS  
MAK - TWA(8h): 270 mg/m<sup>3</sup>, 50 ppm - STEL: 270 mg/m<sup>3</sup>, 50 ppm - Notes: GERMANY  
National - TWA(8h): 274 mg/m<sup>3</sup>, 50 ppm - STEL: 548 mg/m<sup>3</sup>, 100 ppm - Notes: GREAT BRITAIN  
methanol - CAS: 67-56-1  
EU - TWA(8h): 260 mg/m<sup>3</sup>, 200 ppm - Notes: Skin  
ACGIH - TWA(8h): 200 ppm - STEL: 250 ppm - Notes: Skin, BEI - Headache, eye dam, dizziness, nausea  
MAK - TWA(8h): 260 mg/m<sup>3</sup>, 200 ppm - STEL: 1040 mg/m<sup>3</sup>, 800 ppm - Notes: CH-SWISS  
DNEL Exposure Limit Values  
acetone; propan-2-one; propanone - CAS: 67-64-1  
Worker Industry: 186 mg/kg - Worker Professional: 186 mg/kg - Exposure: Human  
Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 2420 mg/m<sup>3</sup> - Worker Professional: 2420 mg/m<sup>3</sup> - Exposure: Human  
Inhalation - Frequency: Short Term, local effects  
Worker Industry: 1210 mg/m<sup>3</sup> - Worker Professional: 1210 mg/m<sup>3</sup> - Exposure: Human  
Inhalation - Frequency: Long Term, systemic effects  
Consumer: 62 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
Consumer: 62 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Consumer: 200 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
n-butyl acetate - CAS: 123-86-4  
Worker Industry: 600 mg/m<sup>3</sup> - Worker Professional: 600 mg/m<sup>3</sup> - Consumer: 300 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects  
Worker Industry: 300 mg/m<sup>3</sup> - Worker Professional: 300 mg/m<sup>3</sup> - Consumer: 35.7 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 11 mg/kg - Worker Professional: 11 mg/kg - Consumer: 6 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Consumer: 2 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
reaction mass of ethylbenzene and xylene  
Worker Industry: 289 mg/m<sup>3</sup> - Worker Professional: 289 mg/m<sup>3</sup> - Consumer: 174 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects  
Worker Industry: 180 mg/kg - Worker Professional: 180 mg/kg - Consumer: 108 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 77 mg/m<sup>3</sup> - Worker Professional: 77 mg/m<sup>3</sup> - Consumer: 14.8 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Consumer: 1.6 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2  
Worker Industry: 89 mg/kg - Consumer: 89 mg/kg - Exposure: Human Dermal -

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Frequency: Short Term, systemic effects

Worker Industry: 1091 mg/m<sup>3</sup> - Consumer: 426 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Short Term, systemic effects

Worker Industry: 246 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 125 mg/kg - Consumer: 75 mg/kg - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

Worker Industry: 98 mg/m<sup>3</sup> - Consumer: 59 mg/m<sup>3</sup> - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Consumer: 26.7 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

aluminium powder (stabilised) - CAS: 7429-90-5

Worker Industry: 3.72 mg/m<sup>3</sup> - Worker Professional: 3.72 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 3.72 mg/m<sup>3</sup> - Worker Professional: 3.72 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 3.95 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

isobutyl acetate - CAS: 110-19-0

Worker Industry: 300 mg/m<sup>3</sup> - Worker Professional: 300 mg/m<sup>3</sup> - Consumer: 35.7 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 600 mg/m<sup>3</sup> - Worker Professional: 600 mg/m<sup>3</sup> - Consumer: 300 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 10 mg/kg - Worker Professional: 10 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 10 - Worker Professional: 10 mg/kg - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Consumer: 5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

xylene (mixture of isomers) - CAS: 1330-20-7

Worker Industry: 442 mg/m<sup>3</sup> - Worker Professional: 442 mg/m<sup>3</sup> - Consumer: 260 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 221 mg/m<sup>3</sup> - Worker Professional: 221 mg/m<sup>3</sup> - Consumer: 65.3 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 212 mg/kg - Worker Professional: 212 mg/kg - Consumer: 125 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 12.5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics - Index number: 649-327-00-6

Worker Industry: 300 mg/kg - Worker Professional: 300 mg/kg - Consumer: 300 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 1300 mg/m<sup>3</sup> - Worker Professional: 1300 mg/m<sup>3</sup> - Consumer: 900 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 300 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Industry: 840 mg/m<sup>3</sup> - Worker Professional: 840 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 1100 mg/m<sup>3</sup> - Worker Professional: 1100 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

ethylbenzene - CAS: 100-41-4

Worker Industry: 77 mg/m<sup>3</sup> - Worker Professional: 77 mg/m<sup>3</sup> - Consumer: 15 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 293 mg/m<sup>3</sup> - Worker Professional: 293 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 180 mg/kg - Worker Professional: 180 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 1.6 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Hydrocarbons, C9, aromatics - CAS: 128601-23-0

Consumer: 11 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

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Worker Industry: 150 mg/m<sup>3</sup> - Worker Professional: 150 mg/m<sup>3</sup> - Consumer: 32 mg/m<sup>3</sup> -  
Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 25 mg/kg - Worker Professional: 25 mg/kg - Consumer: 11 mg/kg -  
Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics - CAS: 64742-48-9  
Worker Industry: 208 mg/kg - Worker Professional: 208 mg/kg - Consumer: 125 mg/kg -  
Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 871 mg/m<sup>3</sup> - Worker Professional: 871 mg/kg - Consumer: 185 mg/m<sup>3</sup> -  
Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Consumer: 125 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2  
Consumer: 33 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
Worker Industry: 369 mg/m<sup>3</sup> - Worker Professional: 369 mg/m<sup>3</sup> - Consumer: 43.9 mg/m<sup>3</sup> -  
Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 183 mg/kg - Worker Professional: 183 mg/m<sup>3</sup> - Consumer: 78 mg/m<sup>3</sup> -  
Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 553.5 mg/m<sup>3</sup> - Worker Professional: 553.5 mg/m<sup>3</sup> - Exposure: Human  
Inhalation - Frequency: Short Term, systemic effects  
Worker Industry: 553.5 mg/m<sup>3</sup> - Worker Professional: 553.5 mg/m<sup>3</sup> - Exposure: Human  
Inhalation - Frequency: Short Term, local effects  
propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0  
Worker Industry: 500 mg/m<sup>3</sup> - Worker Professional: 500 mg/m<sup>3</sup> - Consumer: 89 mg/m<sup>3</sup> -  
Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 888 mg/kg - Worker Professional: 888 mg/kg - Consumer: 319 mg/kg -  
Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
Worker Industry: 1000 mg/m<sup>3</sup> - Worker Professional: 1000 mg/m<sup>3</sup> - Consumer: 178  
mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects  
Consumer: 51 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects  
trans-1,3,3,3-Tetrafluoroprop-1-ene - CAS: 1645-83-6  
Worker Industry: 3902 mg/m<sup>3</sup> - Worker Professional: 3902 mg/m<sup>3</sup> - Consumer: 830  
mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate - CAS: 80-62-6  
Worker Industry: 208 mg/m<sup>3</sup> - Worker Professional: 208 mg/m<sup>3</sup> - Consumer: 74.3 mg/m<sup>3</sup> -  
Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 1.5 04 - Worker Professional: 1.5 04 - Consumer: 1.5 04 - Exposure:  
Human Dermal - Frequency: Short Term, local effects  
Worker Industry: 13.67 mg/kg - Worker Professional: 13.67 mg/kg - Consumer: 8.2 mg/kg  
Exposure: Human Dermal - Frequency: Long Term, systemic effects  
2-methoxy-1-methylethyl acetate - CAS: 108-65-6  
Consumer: 36 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects  
Worker Industry: 275 mg/m<sup>3</sup> - Worker Professional: 275 mg/m<sup>3</sup> - Consumer: 33 mg/m<sup>3</sup> -  
Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Worker Industry: 796 mg/kg - Worker Professional: 796 mg/kg - Consumer: 320 mg/kg -  
Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 550 mg/m<sup>3</sup> - Worker Professional: 550 mg/m<sup>3</sup> - Exposure: Human  
Inhalation - Frequency: Short Term, local effects  
Consumer: 500 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic  
effects  
methanol - CAS: 67-56-1  
Worker Professional: 260 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term,  
systemic effects  
Worker Professional: 260 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term,  
local effects  
Worker Professional: 40 mg/kg - Exposure: Human Dermal - Frequency: Long Term,  
systemic effects  
Consumer: 50 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic  
effects

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Consumer: 50 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Consumer: 8 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

#### PNEC Exposure Limit Values

acetone; propan-2-one; propanone - CAS: 67-64-1

Target: Freshwater sediments - Value: 30.4 mg/kg

Target: Marine water sediments - Value: 3.04 mg/kg

Target: Soil (agricultural) - Value: 29.5 mg/kg

Target: Fresh Water - Value: 10.6 mg/l

Target: Marine water - Value: 1.06 mg/l

n-butyl acetate - CAS: 123-86-4

Target: Fresh Water - Value: 0.18 mg/l

Target: Marine water - Value: 0.018 mg/l

Target: Freshwater sediments - Value: 0.981 mg/kg

Target: Marine water sediments - Value: 0.098 mg/kg

Target: Soil (agricultural) - Value: 0.09 mg/kg

reaction mass of ethylbenzene and xylene

Target: Fresh Water - Value: 0.327 mg/l

Target: Marine water - Value: 0.327 mg/l

Target: Freshwater sediments - Value: 12.46 mg/kg

Target: Marine water sediments - Value: 12.46 mg/kg

Target: Soil (agricultural) - Value: 2.31 mg/kg

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

Target: Freshwater sediments - Value: 34.6 mg/kg

Target: Marine water sediments - Value: 3.46 mg/kg

Target: Soil (agricultural) - Value: 2.33 mg/kg

Target: Fresh Water - Value: 8.8 mg/l

Target: Marine water - Value: 0.88 mg/l

isobutyl acetate - CAS: 110-19-0

Target: Fresh Water - Value: 0.17 mg/l

Target: Marine water - Value: 0.017 mg/l

Target: Freshwater sediments - Value: 0.877 mg/kg

Target: Marine water sediments - Value: 0.0877 mg/kg

Target: Microorganisms in sewage treatments - Value: 200 mg/l

xylene (mixture of isomers) - CAS: 1330-20-7

Target: Fresh Water - Value: 0.327 mg/l

Target: Marine water - Value: 0.327 mg/l

Target: Freshwater sediments - Value: 12.46 mg/kg

Target: Marine water sediments - Value: 12.46 mg/kg

Target: Soil (agricultural) - Value: 2.31 mg/l

ethylbenzene - CAS: 100-41-4

Target: Fresh Water - Value: 0.1 mg/l

Target: Marine water - Value: 0.01 mg/l

Target: Freshwater sediments - Value: 13.7 mg/kg

Target: Marine water sediments - Value: 1.37 mg/kg

Target: Soil (agricultural) - Value: 2.68 mg/kg

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Target: Fresh Water - Value: 10 mg/l

Target: Freshwater sediments - Value: 52.3 mg/kg

Target: Marine water sediments - Value: 5.2 mg/kg

Target: Marine water - Value: 1 mg/l

Target: Soil (agricultural) - Value: 4.59 mg/kg

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Target: Food chain - Value: 160 mg/kg

Target: Fresh Water - Value: 140.9 mg/l

Target: Marine water - Value: 140.9 mg/l

Target: Freshwater sediments - Value: 552 mg/kg



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### HEAT RESISTANT PAINT ALUMINIUM

Target: Soil (agricultural) - Value: 28 mg/kg  
trans-1,3,3,3-Tetrafluoroprop-1-ene - CAS: 1645-83-6  
Target: Fresh Water - Value: 0.117 mg/l  
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate - CAS: 80-62-6  
Target: Fresh Water - Value: 0.94 mg/l  
Target: Soil (agricultural) - Value: 1.47 mg/kg  
Target: Microorganisms in sewage treatments - Value: 10 mg/l  
Target: Freshwater sediments - Value: 5.74 mg/kg  
Target: Marine water - Value: 0.094 mg/l  
2-methoxy-1-methylethyl acetate - CAS: 108-65-6  
Target: Fresh Water - Value: 0.635 mg/l  
Target: Freshwater sediments - Value: 3.29 mg/kg  
Target: Marine water sediments - Value: 0.329 mg/kg  
Target: Microorganisms in sewage treatments - Value: 100 mg/l  
methanol - CAS: 67-56-1  
Target: Fresh Water - Value: 154 mg/l  
Target: Marine water - Value: 15.4 mg/l  
Target: Freshwater sediments - Value: 570.4 mg/l  
Biological Exposure Index  
acetone; propan-2-one; propanone - CAS: 67-64-1  
Value: 25 mg/L - medium: Urine - Biological Indicator: Acetone in urine - Sampling Period:  
End of turn  
8.2. Exposure controls  
Eye protection:  
Eye glasses with side protection.  
Protection for skin:  
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.  
Protection for hands:  
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.  
Respiratory protection:  
Use adequate protective respiratory equipment.  
Thermal Hazards:  
None  
Environmental exposure controls:  
None  
Appropriate engineering controls:  
None

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties                                                | Value          | Method: | Notes: |
|-----------------------------------------------------------|----------------|---------|--------|
| Physical state:                                           | Liquid         | --      | --     |
| Colour:                                                   | Silver         | --      | --     |
| Odour:                                                    | Characteristic | --      | --     |
| Melting point/freezing point:                             | N.A.           | --      | --     |
| Boiling point or initial boiling point and boiling range: | N.A.           | --      | --     |
| Flammability:                                             | Flammable      | --      | --     |

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### HEAT RESISTANT PAINT ALUMINIUM

|                                                    |                                 |    |    |
|----------------------------------------------------|---------------------------------|----|----|
| Lower and upper explosion limit:                   | 1.8 ÷ 9.5 % Vol.                | -- | -- |
| Flash point:                                       | <0 °C                           | -- | -- |
| Auto-ignition temperature:                         | >400 °C                         | -- | -- |
| Decomposition temperature:                         | N.A.                            | -- | -- |
| pH:                                                | Not Relevant                    | -- | -- |
| Kinematic viscosity:                               | >20,5mm <sup>2</sup> /s (40 °C) | -- | -- |
| Solubility in water:                               | NO                              | -- | -- |
| Solubility in oil:                                 | N.A.                            | -- | -- |
| Partition coefficient n-octanol/water (log value): | N.A.                            | -- | -- |
| Vapour pressure:                                   | 4.5 bar +/- 0.5 20 °C           | -- | -- |
| Density and/or relative density:                   | 0.75 +/- 0.05                   | -- | -- |
| Relative vapour density:                           | >1 (air=1)                      | -- | -- |
| Deformation Pressure:                              | 15 bar                          | -- | -- |
| Explosion Pressure:                                | 16 ÷ 20 bar                     | -- | -- |
| Volatile organic compounds - VOC                   | 600 g/l                         | -- | -- |
| Volatile organic compounds - VOC                   | 80 %                            | -- | -- |
| Particle characteristics:                          |                                 |    |    |
| Particle size:                                     | N.A.                            | -- | -- |

9.2. Other information  
No other relevant information

## SECTION 10: Stability and reactivity

- 10.1. Reactivity  
Stable under normal conditions
- 10.2. Chemical stability  
Stable under normal conditions
- 10.3. Possibility of hazardous reactions  
None
- 10.4. Conditions to avoid  
Stable under normal conditions.

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### HEAT RESISTANT PAINT ALUMINIUM

#### 10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

#### 10.6. Hazardous decomposition products

None.

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## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the product:

#### HEAT RESISTANT PAINT ALUMINIUM

##### a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

##### b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

##### c) serious eye damage/irritation

The product is classified: Eye Irrit. 2 H319

##### d) respiratory or skin sensitisation

The product is classified: Skin Sens. 1A H317

##### e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

##### f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

##### g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

##### h) STOT-single exposure

The product is classified: STOT SE 3 H336

##### i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

##### j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

acetone; propan-2-one; propanone - CAS: 67-64-1

##### a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 5800 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 7400 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 76 mg/l - Duration: 4h

##### b) skin corrosion/irritation:

Test: Skin Irritant Positive

##### c) serious eye damage/irritation:

Test: Eye Irritant Positive

propane - CAS: 74-98-6

##### a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat = 800000 ppm - Duration: 15MIN

Test: LC50 - Route: Inhalation - Species: Rat = 14442738 mg/m3 - Duration: 15MIN

Test: LC50 - Route: Inhalation - Species: Rat = 1443 mg/l - Duration: 15MIN

Test: LC50 - Route: Inhalation - Species: Mouse = 260000 ppm - Duration: 4h

##### e) germ cell mutagenicity:

Test: Mutagenesis Negative - Notes: METHOD: OECD 471

Test: Mutagenesis Negative - Notes: METHOD: OECD 474

Test: NOAEL - Route: Inhalation - Species: Rat = 21641 mg/l - Duration: 24H - Notes: METHOD: OECD TG 422

## Safety Data Sheet

### HEAT RESISTANT PAINT ALUMINIUM

- g) reproductive toxicity:  
Test: NOAEL - Route: Inhalation - Species: Rat = 21641 mg/l - Duration: 24H - Notes:  
METHOD: OECD TG 422
- i) STOT-repeated exposure:  
Test: NOAEL - Route: Inhalation Gas - Species: Rat = 7.214 mg/l - Duration: 24H
- n-butyl acetate - CAS: 123-86-4
- a) acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat = 10760 mg/kg - Source: (FEMALE)  
Test: LD50 - Route: Skin - Species: Rabbit = 14112 mg/kg - Source: OCSE 402  
Test: LC50 - Route: Inhalation - Species: Rat > 21 mg/l - Duration: 4h - Source: OCSE 403
- butane - CAS: 106-97-8
- a) acute toxicity:  
Test: LC50 - Route: Inhalation - Species: Rat = 658 mg/l - Duration: 4h  
Test: LC50 - Route: Inhalation - Species: Rat = 274200 ppm - Duration: 4h
- e) germ cell mutagenicity:  
Test: Mutagenesis Negative - Notes: METHOD: OECD 473  
Test: Mutagenesis Negative - Notes: METHOD: OECD 474  
Test: NOAEL - Route: Inhalation - Species: Rat = 21394 mg/l - Duration: 24H - Notes:  
METHOD: OECD TG 422
- g) reproductive toxicity:  
Test: NOAEL - Route: Inhalation - Species: Rat = 21394 mg/l - Duration: 24H - Notes:  
METHOD: OECD TG 422
- i) STOT-repeated exposure:  
Test: NOAEL - Route: Inhalation Gas - Species: Rat = 21394 mg/l - Duration: 24H -  
Notes: METHOD: OECD 422  
Test: NOAEL - Route: Inhalation Gas - Species: Rat = 4000-16000 mg/l - Duration: 6H
- Talc - CAS: 14807-96-6
- a) acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
- isobutane - CAS: 75-28-5
- a) acute toxicity:  
Test: LC50 - Route: Inhalation - Species: Rat = 658 mg/l - Duration: 4h  
Test: LC50 - Route: Inhalation - Species: Mouse = 260000 ppm - Duration: 4h
- e) germ cell mutagenicity:  
Test: Mutagenesis Negative  
Test: Mutagenesis Negative - Notes: METHOD: OECD 474  
Test: NOAEL - Route: Inhalation - Species: Rat = 21394 mg/l - Duration: 24H - Notes:  
METHOD: OECD TG 422
- g) reproductive toxicity:  
Test: NOAEL - Route: Inhalation - Species: Rat = 7131 mg/l - Duration: 24H - Notes:  
METHOD: OECD TG 422
- i) STOT-repeated exposure:  
Test: NOAEL - Route: Inhalation Gas - Species: Rat = 21.394 mg/l - Duration: 24H -  
Notes: METHOD: OECD 422
- reaction mass of ethylbenzene and xylene
- a) acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat = 3523 mg/kg - Notes: (EU Method B.1)  
Test: LC50 - Route: Inhalation - Species: Rat = 27571 mg/l - Duration: 4h - Notes: (EU Method B.2)  
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/l
- i) STOT-repeated exposure:  
Test: NOAEL - Route: Oral - Species: Rat = 250 mg/kg bw
- 2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2
- a) acute toxicity  
ATE - Oral 1200 mg/kg bw  
ATE - Inhalation (Vapours) 3 mg/l  
Test: LD50 - Route: Oral - Species: Rat = 1300 ml/kg

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### HEAT RESISTANT PAINT ALUMINIUM

Test: LC50 - Route: Inhalation - Species: Rat 450-900 mg/kg - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit 435-2000 mg/kg

aluminium powder (stabilised) - CAS: 7429-90-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 15900 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 5 mg/l - Duration: 4h

isobutyl acetate - CAS: 110-19-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 13413 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 23.4 mg/l - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit > 17400 mg/kg

xylene (mixture of isomers) - CAS: 1330-20-7

a) acute toxicity:

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 27124 mg/l - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat = 3523 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 12126 mg/kg

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics - Index number: 649-327-00-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat > 5000 mg/kg - Duration: 8h

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Duration: 24H

ethylbenzene - CAS: 100-41-4

a) acute toxicity:

Test: LD50 - Route: Skin - Species: Rabbit = 17800 mg/kg

Test: LD50 - Route: Oral - Species: Rat = 3500 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 4000 mg/l - Duration: 4h

Hydrocarbons, C9, aromatics - CAS: 128601-23-0

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 6193 mg/m<sup>3</sup> - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat = 3592 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg

Condensation products of dimerised fatty acids, C18-unsaturated, with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine - CAS: 162627-17-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 10000 mg/kg

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics - CAS: 64742-48-9

a) acute toxicity:

Test: LC50 - Route: Inhalation Vapour - Species: Rat > 5000 mg/m<sup>3</sup> - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 8500 mg/m<sup>3</sup> - Duration: 4h

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 4016 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Duration: 24H

Test: LC50 - Route: Inhalation Vapour - Species: Rat > 6000 ppm - Duration: 6H

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 5840 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 13900 ml/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat > 10000 ppm - Duration: 6H

b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit Negative

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Positive

g) reproductive toxicity:

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### HEAT RESISTANT PAINT ALUMINIUM

Test: Reproductive Toxicity - Route: Oral - Species: Rabbit = 480 mg/kg  
trans-1,3,3,3-Tetrafluoroprop-1-ene - CAS: 1645-83-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 207000 ppm - Duration: 4h

Test: Skin Irritant - Route: Skin - Species: Rabbit Negative - Notes: METHOD: OECD 404

e) germ cell mutagenicity:

Test: Genotoxicity Negative

Test: Genotoxicity Negative

Test: Genotoxicity - Route: Inhalation - Species: Mouse Negative

i) STOT-repeated exposure:

Test: NOAEL - Route: Inhalation - Species: Rat = 5000 ppm - Notes: 13 weeks

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate - CAS: 80-62-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 8400 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 35000 mg/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 7093 ppm - Duration: 4h

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 23.5 mg/l

#### 11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

---

## SECTION 12: Ecological information

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

WGK: 2

#### HEAT RESISTANT PAINT ALUMINIUM

Not classified for environmental hazards

Based on available data, the classification criteria are not met

acetone; propan-2-one; propanone - CAS: 67-64-1

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 530 mg/l - Notes: 8 d

Endpoint: LC50 - Species: Fish = 8120 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 8800 mg/l - Duration h: 48

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia = 2212 mg/l - Notes: 28 d

propane - CAS: 74-98-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 49.47 mg/l

Endpoint: EC50 - Species: Daphnia = 27.14 mg/l

Endpoint: EC50 - Species: Algae = 11.89 mg/l

n-butyl acetate - CAS: 123-86-4

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 44 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 675 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 18 mg/l - Duration h: 96 - Notes: OECD 203

butane - CAS: 106-97-8

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 24.11 mg/l - Duration h: 96

Endpoint: LC50 - Species: Daphnia = 14.22 mg/l - Duration h: 48

isobutane - CAS: 75-28-5

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### HEAT RESISTANT PAINT ALUMINIUM

- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 24.11-147.54 mg/l - Duration h: 96  
Endpoint: EC50 - Species: Daphnia = 14.22-69.43 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Algae = 7.71-19.37 mg/l
- reaction mass of ethylbenzene and xylene
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 2.6 mg/l - Duration h: 96  
Endpoint: EC50 - Species: Algae = 2.2 mg/l - Duration h: 72
- 2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2
- a) Aquatic acute toxicity:  
Endpoint: EC50 - Species: Daphnia = 1550 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Algae = 91840 mg/l - Duration h: 72  
Endpoint: LC50 - Species: Fish = 1474 mg/l - Duration h: 96
- b) Aquatic chronic toxicity:  
Endpoint: NOEC - Species: Fish > 100 mg/l - Notes: 21 d  
Endpoint: NOEC - Species: Daphnia = 100 mg/l - Notes: 21 d
- isobutyl acetate - CAS: 110-19-0
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 17 mg/l - Duration h: 96  
Endpoint: EC50 - Species: Daphnia = 25 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Algae = 370 mg/l - Duration h: 72
- xylene (mixture of isomers) - CAS: 1330-20-7
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 2.6 mg/l - Duration h: 96  
Endpoint: EC50 - Species: Daphnia = 1 mg/l - Duration h: 24  
Endpoint: EC50 - Species: Algae = 1.3 mg/l - Duration h: 72
- Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics - Index number: 649-327-00-6
- a) Aquatic acute toxicity:  
Endpoint: LL50 - Species: Fish > 1000 mg/l - Duration h: 24  
Endpoint: LL50 - Species: Daphnia > 1000 mg/l - Duration h: 48
- ethylbenzene - CAS: 100-41-4
- a) Aquatic acute toxicity:  
Endpoint: EC50 - Species: Daphnia = 75 mg/l - Duration h: 48 - Notes: Daphnia magna  
Endpoint: LC50 - Species: Fish = 48.5 mg/l - Duration h: 96 - Notes: Phimephales
- Hydrocarbons, C9, aromatics - CAS: 128601-23-0
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 9.2 mg/l - Duration h: 96  
Endpoint: EC50 - Species: Daphnia = 3.2 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Algae = 2.9 mg/l - Duration h: 72
- Condensation products of dimerised fatty acids, C18-unsaturated, with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine - CAS: 162627-17-0
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish > 150 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 48
- Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics - CAS: 64742-48-9
- a) Aquatic acute toxicity:  
Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 72  
Endpoint: EC50 - Species: Daphnia > 1000 mg/l - Duration h: 48  
Endpoint: LC50 - Species: Fish > 1000 mg/l - Duration h: 96
- b) Aquatic chronic toxicity:  
Endpoint: NOEC - Species: Daphnia = 100 mg/l - Notes: 21 gg  
Endpoint: NOEC - Species: Fish = 0.131 mg/l - Notes: 28 gg
- 1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 6812 mg/l - Duration h: 96  
Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 168  
Endpoint: EC50 - Species: Daphnia = 23300 mg/l - Duration h: 48

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### HEAT RESISTANT PAINT ALUMINIUM

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 9640 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 10000 mg/l - Duration h: 24

c) Bacteria toxicity:

Endpoint: EC50 = 1050 mg/l

e) Plant toxicity:

Endpoint: EC50 - Species: Algae > 1800 mg/l - Duration h: 168

trans-1,3,3,3-Tetrafluoroprop-1-ene - CAS: 1645-83-6

a) Aquatic acute toxicity:

Endpoint: NOEC - Species: Fish > 117 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia > 160 mg/l - Duration h: 48

Endpoint: NOEC - Species: Algae > 170 mg/l - Duration h: 72

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate - CAS: 80-62-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 79 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 69 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 170 mg/l - Duration h: 96

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 134 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 72

Endpoint: EC50 - Species: Daphnia > 500 mg/l - Duration h: 48

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia > 100 mg/l - Notes: 21 d

methanol - CAS: 67-56-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 29400 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia > 10000 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 22000 mg/l - Duration h: 72

#### 12.2. Persistence and degradability

None

acetone; propan-2-one; propanone - CAS: 67-64-1

Biodegradability: Readily biodegradable

propane - CAS: 74-98-6

Biodegradability: Readily biodegradable

n-butyl acetate - CAS: 123-86-4

Biodegradability: Readily biodegradable

butane - CAS: 106-97-8

Biodegradability: Readily biodegradable

isobutane - CAS: 75-28-5

Biodegradability: Readily biodegradable

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

Biodegradability: Readily biodegradable

isobutyl acetate - CAS: 110-19-0

Biodegradability: Readily biodegradable

Hydrocarbons, C9, aromatics - CAS: 128601-23-0

Biodegradability: Readily biodegradable

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics - CAS: 64742-48-9

Biodegradability: Readily biodegradable

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Biodegradability: Readily biodegradable

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Biodegradability: Readily biodegradable

trans-1,3,3,3-Tetrafluoroprop-1-ene - CAS: 1645-83-6

Biodegradability: Non-readily biodegradable

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

Biodegradability: Readily biodegradable



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### HEAT RESISTANT PAINT ALUMINIUM

#### 12.3. Bioaccumulative potential

acetone; propan-2-one; propanone - CAS: 67-64-1

Bioaccumulation: Not bioaccumulative - Test: BCF - Bioconcentration factor 3

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.24

propane - CAS: 74-98-6

Bioaccumulation: Bioaccumulative - Test: Kow - Partition coefficient 2.35

n-butyl acetate - CAS: 123-86-4

Test: BCF - Bioconcentration factor 15.3

Test: Kow - Partition coefficient 2.3 - Notes: n-octanol/water

butane - CAS: 106-97-8

Bioaccumulation: Bioaccumulative - Test: Kow - Partition coefficient 2.89

isobutane - CAS: 75-28-5

Test: Kow - Partition coefficient 2.88

2-butoxyethanol; ethylene glycol monobutyl ether - CAS: 111-76-2

Test: Kow - Partition coefficient 0.81 - Notes: 1-OCTANOL/WATER

isobutyl acetate - CAS: 110-19-0

Test: Kow - Partition coefficient 2.3

Test: BCF - Bioconcentration factor 15.3

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient -0.49

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Bioaccumulation: Not bioaccumulative - Test: Kow - Partition coefficient 0.05 - Notes:

OECD 107

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate - CAS: 80-62-6

Test: Kow - Partition coefficient 0.7

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

Bioaccumulation: Not bioaccumulative

methanol - CAS: 67-56-1

Test: Kow - Partition coefficient 0.82

Test: BCF - Bioconcentration factor 10

#### 12.4. Mobility in soil

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

Mobility in soil: Mobile

#### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

#### 12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

#### 12.7. Other adverse effects

None

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Additional disposal information:

WASTE CODE = 160504

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### SECTION 14: Transport information

#### 14.1. UN number or ID number

ADR-UN number: 1950

IATA-Un number: 1950

IMDG-Un number: 1950

#### 14.2. UN proper shipping name

ADR-Shipping Name: AEROSOLS

IATA-Shipping Name: AEROSOLS, flammable

IMDG-Shipping Name: AEROSOLS

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### HEAT RESISTANT PAINT ALUMINIUM

- 14.3. Transport hazard class(es)  
ADR-Class: 2 - 5F  
ADR-Label: 2.1  
IATA-Class: 2.1  
IATA-Label: 2.1  
IMDG-Class: 2.1
- 14.4. Packing group  
ADR-Packing Group: -  
IATA-Packing group: -  
IMDG-Packing group: -
- 14.5. Environmental hazards  
Marine pollutant: No  
IMDG-EMS: F-D S-U
- 14.6. Special precautions for user  
ADR-Transport category (Tunnel restriction code): D  
ADR-Limited Quantity (LQ): 1 L  
IATA-Passenger Aircraft: Forbidden  
IATA-Cargo Aircraft: 203  
IMDG-Shipping Name: AEROSOLS
- 14.7. Maritime transport in bulk according to IMO instruments  
N.A.

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#### SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) n. 2020/878  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)  
Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
Regulation (EU) n. 2016/918 (ATP 8 CLP)  
Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
Regulation (EU) n. 2017/776 (ATP 10 CLP)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)  
Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
Regulation (EU) n. 2019/521 (ATP 12 CLP)  
Regulation (EU) n. 2020/217 (ATP 14 CLP)  
Regulation (EU) n. 2020/1182 (ATP 15 CLP)  
Regulation (EU) n. 2021/643 (ATP 16 CLP)  
Regulation (EU) n. 2021/849 (ATP 17 CLP)  
Regulation (EU) n. 2022/692 (ATP 18 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:  
Restrictions related to the product:  
Restriction 3  
Restriction 40  
Restrictions related to the substances contained:  
Restriction 69  
Restriction 70  
Restriction 75

Where applicable, refer to the following regulatory provisions :

## Safety Data Sheet

### HEAT RESISTANT PAINT ALUMINIUM

Directive 2012/18/EU (Seveso III)  
Regulation (EC) nr 648/2004 (detergents).  
Dir. 2004/42/EC (VOC directive)  
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

Provisions related to directive EU 2012/18 (Seveso III):  
Seveso III category according to Annex 1, part 1  
Product belongs to category: P3a

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

n-butyl acetate  
reaction mass of ethylbenzene and xylene  
2-butoxyethanol; ethylene glycol monobutyl ether  
xylene (mixture of isomers)  
Hydrocarbons, C9, aromatics  
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics  
1-methoxy-2-propanol; monopropylene glycol methyl ether  
propan-2-ol; isopropyl alcohol; isopropanol  
2-methoxy-1-methylethyl acetate

#### 15.3. VOC

Volatile organic compounds - VOCs = 600 g/l

Volatile organic compounds - VOCs = 80 %

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

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## SECTION 16: Other information

Full text of phrases referred to in Section 3:

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.  
H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.  
H226 Flammable liquid and vapour.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H331 Toxic if inhaled.  
H302 Harmful if swallowed.  
H261 In contact with water releases flammable gases.  
H228 Flammable solid.  
H412 Harmful to aquatic life with long lasting effects.  
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.  
H317 May cause an allergic skin reaction.  
H370 Causes damage to organs.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H371 May cause damage to organs.

## Safety Data Sheet

### HEAT RESISTANT PAINT ALUMINIUM

| Hazard class and hazard category | Code         | Description                                                                      |
|----------------------------------|--------------|----------------------------------------------------------------------------------|
| Water-react. 2                   | 2.12/2       | Substance or mixture which in contact with water emits flammable gas, Category 2 |
| Flam. Gas 1A                     | 2.2/1A       | Flammable gas, Category 1A                                                       |
| Aerosols 1                       | 2.3/1        | Aerosol, Category 1                                                              |
| Press. Gas                       | 2.5          | Gases under pressure                                                             |
| Press Gas (Comp.)                | 2.5/C        | Gases under pressure (Compressed gas)                                            |
| Flam. Liq. 2                     | 2.6/2        | Flammable liquid, Category 2                                                     |
| Flam. Liq. 3                     | 2.6/3        | Flammable liquid, Category 3                                                     |
| Flam. Sol. 1                     | 2.7/1        | Flammable solid, Category 1                                                      |
| Acute Tox. 3                     | 3.1/3/Dermal | Acute toxicity (dermal), Category 3                                              |
| Acute Tox. 3                     | 3.1/3/Inhal  | Acute toxicity (inhalation), Category 3                                          |
| Acute Tox. 3                     | 3.1/3/Oral   | Acute toxicity (oral), Category 3                                                |
| Acute Tox. 4                     | 3.1/4/Dermal | Acute toxicity (dermal), Category 4                                              |
| Acute Tox. 4                     | 3.1/4/Inhal  | Acute toxicity (inhalation), Category 4                                          |
| Acute Tox. 4                     | 3.1/4/Oral   | Acute toxicity (oral), Category 4                                                |
| Asp. Tox. 1                      | 3.10/1       | Aspiration hazard, Category 1                                                    |
| Skin Irrit. 2                    | 3.2/2        | Skin irritation, Category 2                                                      |
| Eye Irrit. 2                     | 3.3/2        | Eye irritation, Category 2                                                       |
| Skin Sens. 1                     | 3.4.2/1      | Skin Sensitisation, Category 1                                                   |
| Skin Sens. 1A                    | 3.4.2/1A     | Skin Sensitisation, Category 1A                                                  |
| STOT SE 1                        | 3.8/1        | Specific target organ toxicity - single exposure, Category 1                     |
| STOT SE 2                        | 3.8/2        | Specific target organ toxicity - single exposure, Category 2                     |
| STOT SE 3                        | 3.8/3        | Specific target organ toxicity - single exposure, Category 3                     |
| STOT RE 2                        | 3.9/2        | Specific target organ toxicity - repeated exposure, Category 2                   |
| Aquatic Chronic 2                | 4.1/C2       | Chronic (long term) aquatic hazard, category 2                                   |
| Aquatic Chronic 3                | 4.1/C3       | Chronic (long term) aquatic hazard, category 3                                   |

## Safety Data Sheet

### HEAT RESISTANT PAINT ALUMINIUM

Paragraphs modified from the previous revision:

SECTION 3: Composition/information on ingredients  
SECTION 8: Exposure controls/personal protection  
SECTION 11: Toxicological information  
SECTION 12: Ecological information  
SECTION 14: Transport information  
SECTION 15: Regulatory information  
SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| Classification according to Regulation (EC) Nr. 1272/2008 | Classification procedure |
|-----------------------------------------------------------|--------------------------|
| Aerosols 1, H222, H229                                    | On basis of test data    |
| Eye Irrit. 2, H319                                        | Calculation method       |
| Skin Sens. 1A, H317                                       | Calculation method       |
| STOT SE 3, H336                                           | Calculation method       |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ATE: Acute Toxicity Estimate  
ATEmix: Acute toxicity Estimate (Mixtures)  
CAS: Chemical Abstracts Service (division of the American Chemical Society).  
CLP: Classification, Labeling, Packaging.  
DNEL: Derived No Effect Level.  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
GefStoffVO: Ordinance on Hazardous Substances, Germany.  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
IATA: International Air Transport Association.  
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  
ICAO: International Civil Aviation Organization.  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).  
IMDG: International Maritime Code for Dangerous Goods.  
INCI: International Nomenclature of Cosmetic Ingredients.  
KSt: Explosion coefficient.

## Safety Data Sheet

### HEAT RESISTANT PAINT ALUMINIUM

|       |                                                                               |
|-------|-------------------------------------------------------------------------------|
| LC50: | Lethal concentration, for 50 percent of test population.                      |
| LD50: | Lethal dose, for 50 percent of test population.                               |
| PNEC: | Predicted No Effect Concentration.                                            |
| RID:  | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STEL: | Short Term Exposure limit.                                                    |
| STOT: | Specific Target Organ Toxicity.                                               |
| TLV:  | Threshold Limiting Value.                                                     |
| TWA:  | Time-weighted average                                                         |
| WGK:  | German Water Hazard Class.                                                    |