

# SAFETY DATA SHEET

Dated 20/9/2021

Version 3 20/9/2021

# INRAL

**Trade name: INRAL HAMMER**

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

### 1.1 Product identifier

**Mixture identification:**

**Trade name:** INRAL HAMMER

### 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:**

UAB TEGRA STATE  
Savanorių ave. 178A,  
LT-03154 Vilnius, Lithuania  
Tel. +37052661167  
www.tegrastate.lt  
E-mail: info@tegra.lt

### 1.4 Emergency telephone number

112

## 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, 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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## Hazard statements:

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

H319 Causes serious eye irritation.

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

ethyl acetate

n-butyl acetate

propan-2-ol; isopropyl alcohol; isopropanol

## 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

## 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

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⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H336

EUH066

#### **>= 15% - < 20% Hydrocarbons, C3-4; Petroleum gas**

REACH No.: 01-2119486557-22, Index number: 649-199-00-1, CAS: 68476-40-4, EC: 270-681-9

⚠ 2.2/1A Flam. Gas 1A H220

⚠ 2.5/L Press Gas (Liq.) H280

DECLK (CLP)\*

#### **>= 15% - < 20% ethyl acetate**

REACH No.: 01-2119475103-46, Index number: 607-022-00-5, CAS: 141-78-6, EC: 205-500-4

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H336

EUH066

#### **>= 10% - < 12.5% 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

#### **>= 3% - < 5% 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

⚠ 3.1/4/Inhal Acute Tox. 4 H332

⚠ 3.1/4/Oral Acute Tox. 4 H302

⚠ 3.2/2 Skin Irrit. 2 H315

⚠ 3.3/2 Eye Irrit. 2 H319

#### **>= 2.5% - < 3% 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

#### **>= 0.5% - < 1% aluminium powder (stabilised)**

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

#### **>= 0.5% - < 1% butan-1-ol; n-butanol**

REACH No.: 01-2119484630-38, Index number: 603-004-00-6, CAS: 71-36-3, EC: 200-751-6

⚠ 2.6/3 Flam. Liq. 3 H226

⚠ 3.8/3 STOT SE 3 H335

⚠ 3.2/2 Skin Irrit. 2 H315

⚠ 3.3/1 Eye Dam. 1 H318

⚠ 3.8/3 STOT SE 3 H336

⚠ 3.1/4/Oral Acute Tox. 4 H302

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## **>= 0.3% - < 0.5% 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

 3.8/3 STOT SE 3 H336

## **>= 0.25% - < 0.3% 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

## **960 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

## **456 ppm 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

## **145 ppm 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

## **120 ppm Silicon dioxide, chemically prepared [CAS-No. 112945-52-5 resp. 7631-86-9]**

REACH No.: 01-2119379499-16, CAS: 7631-86-9, EC: 231-545-4

Substance with a Union workplace exposure limit.

## **120 ppm Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics**

REACH No.: 01-2119457273-39, EC: 918-481-9

 3.10/1 Asp. Tox. 1 H304

EUH066

## **60 ppm 2-Pentanone oxime**

REACH No.: 01-0000020248-72, CAS: 623-40-5, EC: 484-470-6

 3.1/4/Oral Acute Tox. 4 H302

 3.3/2 Eye Irrit. 2 H319

 3.9/2 STOT RE 2 H373

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4.1/C3 Aquatic Chronic 3 H412

## 55 ppm formaldehyde

REACH No.: 01-2119488953-20, Index number: 605-001-00-5, CAS: 50-00-0, EC: 200-001-8

- 3.6/1B Carc. 1B H350
- 3.5/2 Muta. 2 H341
- 3.1/3/Oral Acute Tox. 3 H301
- 3.1/3/Dermal Acute Tox. 3 H311
- 3.1/3/Inhal Acute Tox. 3 H331
- 3.2/1B Skin Corr. 1B H314
- 3.4.2/1 Skin Sens. 1 H317

Specific Concentration Limits:

C >= 25%: Skin Corr. 1B H314

5% <= C < 25%: Skin Irrit. 2 H315

5% <= C < 25%: Eye Irrit. 2 H319

C >= 5%: STOT SE 3 H335

C >= 0,2%: Skin Sens. 1 H317

## 27 ppm triethylamine

REACH No.: 01-2119475467-26, Index number: 612-004-00-5, CAS: 121-44-8, EC: 204-469-4

- 2.6/2 Flam. Liq. 2 H225
- 3.8/3 STOT SE 3 H335
- 3.2/1A Skin Corr. 1A H314
- 3.3/1 Eye Dam. 1 H318
- 3.1/4/Oral Acute Tox. 4 H302
- 3.1/3/Dermal Acute Tox. 3 H311
- 3.1/3/Inhal Acute Tox. 3 H331

Specific Concentration Limits:

C >= 1%: STOT SE 3 H335

## 2 ppm toluene

REACH No.: 01-2119471310-51, Index number: 601-021-00-3, CAS: 108-88-3, EC: 203-625-9

- 2.6/2 Flam. Liq. 2 H225
- 3.7/2 Repr. 2 H361d
- 3.10/1 Asp. Tox. 1 H304
- 3.9/2 STOT RE 2 H373
- 3.2/2 Skin Irrit. 2 H315
- 3.8/3 STOT SE 3 H336

\*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:**

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

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media:**

CO<sup>2</sup> 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 provokes an increase of the pressure inside the container with danger of burst. 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.

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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.

## 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

## 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

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

## 7.3 Specific end use(s)

None in particular

## 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

#### Hydrocarbons, C3-4; Petroleum gas - CAS: 68476-40-4

EU - TWA(8h): 1000 ppm

ACGIH - TWA(8h): 1000 ppm

#### ethyl acetate - CAS: 141-78-6

ACGIH - TWA(8h): 400 ppm - Notes: URT and eye irr

MAK - TWA(8h): 1400 mg/m<sup>3</sup>, 400 ppm - STEL: 2800 mg/m<sup>3</sup>, 800 ppm - Notes: SWISS

EU - TWA(8h): 734 mg/m<sup>3</sup>, 200 ppm - STEL: 1468 mg/m<sup>3</sup>, 400 ppm

MAK - TWA(8h): 1050 mg/m<sup>3</sup>, 300 ppm - STEL(): 2100 mg/m<sup>3</sup>, 600 ppm - Notes: AUSTRIA

TLV - TWA(8h): 700 mg/m<sup>3</sup> - STEL(): 900 mg/m<sup>3</sup> - Notes: CZECH REPUBLIC

GVI - TWA(8h): 200 ppm - STEL(): 400 ppm - Notes: CROATIA

VLA - TWA(8h): 1460 mg/m<sup>3</sup>, 400 ppm - Notes: SPAIN

NIOSH - TWA(8h): 1440 mg/m<sup>3</sup>, 400 ppm - Notes: ITALY

#### 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

#### 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

#### 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

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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  
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

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

## **butan-1-ol; n-butanol - CAS: 71-36-3**

ACGIH - TWA(8h): 20 ppm - Notes: Eye and URT irr  
MAK - TWA(8h): 150 mg/m<sup>3</sup>, 50 ppm - STEL(): 600 mg/m<sup>3</sup>, 200 ppm - Notes: AUSTRIA  
MAK - TWA(8h): 310 mg/m<sup>3</sup>, 100 ppm - STEL(): 310 mg/m<sup>3</sup>, 100 ppm - Notes: GERMANY  
TLV - TWA(8h): 300 mg/m<sup>3</sup> - STEL(): 600 mg/m<sup>3</sup> - Notes: CZECH REPUBLIC  
VLA - TWA(8h): 61 mg/m<sup>3</sup>, 20 ppm - STEL(): 154 mg/m<sup>3</sup>, 50 ppm - Notes: SPAIN  
VLEP - STEL(): 150 mg/m<sup>3</sup>, 50 ppm - Notes: FRANCE  
GVI - STEL: 150 mg/m<sup>3</sup>, 50 ppm - Notes: CROATIA: K  
MAK - TWA(8h): 150 mg/m<sup>3</sup>, 50 ppm - STEL: 150 mg/m<sup>3</sup>, 50 ppm - Notes: SWISS

## **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: A - 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)

## **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

## **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

## **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): 100 ppm - STEL: 150 ppm - Notes: A4, BEI - URT and eye irr, 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

## **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: A3, BEI - URT irr, kidney dam (nephropathy), cochlear 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)

## **Silicon dioxide, chemically prepared [CAS-No. 112945-52-5 resp. 7631-86-9] - CAS: 7631-86-9**

EU - TWA(8h): 3 mg/m<sup>3</sup> - Notes: Type of exposure: Respirable Particles (IT)

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EU - TWA(8h): 10 mg/m<sup>3</sup> - Notes: Type of exposure: Inhalable particles (IT)

MAK - TWA(8h): 4 mg/m<sup>3</sup> - Notes: SWISS, SSc

**Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics**

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

**formaldehyde - CAS: 50-00-0**

ACGIH - TWA(8h): 0.1 ppm - STEL: 0.3 ppm - Notes: DSEN, RSEN, A1 - URT and eye irr, URT cancer

EU - TWA(8h): 0,37 mg/m<sup>3</sup>, 0,3 ppm - STEL: 0,74 mg/m<sup>3</sup>, 0,6 ppm - Notes: Dermal sensitisation

MAK - TWA(8h): 0.37 mg/m<sup>3</sup>, 0.3 ppm - STEL: 0.74 mg/m<sup>3</sup>, 0.6 ppm - Notes: CH - SWISS

**triethylamine - CAS: 121-44-8**

EU - TWA(8h): 8.4 mg/m<sup>3</sup>, 2 ppm - STEL: 12.6 mg/m<sup>3</sup>, 3 ppm - Notes: Skin

ACGIH - TWA(8h): 0.5 ppm - STEL: 1 ppm - Notes: Skin, A4 - Visual impair, URT irr

MAK - TWA(8h): 4.2 mg/m<sup>3</sup>, 1 ppm - STEL: 8.4 mg/m<sup>3</sup>, 2 ppm - Notes: SWISS

**toluene - CAS: 108-88-3**

EU - TWA(8h): 192 mg/m<sup>3</sup>, 50 ppm - STEL: 384 mg/m<sup>3</sup>, 100 ppm - Notes: Skin

ACGIH - TWA(8h): 20 ppm - Notes: A4, BEI - Visual impair, female repro, pregnancy loss

MAK - TWA(8h): 190 mg/m<sup>3</sup>, 50 ppm - STEL: 380 mg/m<sup>3</sup>, 100 ppm - Notes: AT-AUSTRIA: K (Skin)

MAK - TWA(8h): 190 mg/m<sup>3</sup>, 50 ppm - STEL: 760 mg/m<sup>3</sup>, 200 ppm - Notes: DE-GERMANY

MAK - TWA(8h): 190 mg/m<sup>3</sup>, 50 ppm - STEL: 760 mg/m<sup>3</sup>, 200 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

**ethyl acetate - CAS: 141-78-6**

Worker Industry: 734 mg/m<sup>3</sup> - Worker Professional: 734 mg/m<sup>3</sup> - Consumer: 367 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 1468 mg/m<sup>3</sup> - Worker Professional: 1468 mg/m<sup>3</sup> - Consumer: 734 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 63 mg/kg - Worker Professional: 63 mg/kg - Consumer: 37 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 4.5 mg/kg - Exposure: Human Oral - 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

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

Worker Industry: 89 mg/kg - Consumer: 89 mg/kg - Exposure: Human Dermal - 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

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# INRAL

**Trade name: INRAL HAMMER**

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

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

Consumer: 6.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic 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

**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: Short Term, systemic effects

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

**butan-1-ol; n-butanol - CAS: 71-36-3**

Consumer: 3.1 mg/kg - Exposure: Human Oral - Frequency: Short Term, local effects

Worker Industry: 310 mg/m<sup>3</sup> - Worker Professional: 310 mg/m<sup>3</sup> - Consumer: 155 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

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

Consumer: 3.3 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, local 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 Professional: 960 mg/m<sup>3</sup> - Consumer: 859.7 - Exposure: Human Inhalation - Frequency: Short Term (acute)

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

Consumer: 5 mg/kg - Exposure: Human Oral - 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

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

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, local effects

Worker Industry: 180 mg/kg - Worker Professional: 180 mg/kg - Consumer: 108 mg/kg - Exposure: Human Dermal -

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**Trade name: INRAL HAMMER**

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

#### **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

#### **Silicon dioxide, chemically prepared [CAS-No. 112945-52-5 resp. 7631-86-9] - CAS: 7631-86-9**

Worker Industry: 4 mg/m<sup>3</sup> - Worker Professional: 4 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 4 mg/m<sup>3</sup> - Worker Professional: 4 mg/m<sup>3</sup> - Frequency: Long Term, systemic effects

#### **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics**

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

#### **2-Pentanone oxime - CAS: 623-40-5**

Worker Industry: 25 mg/m<sup>3</sup> - Worker Professional: 25 mg/m<sup>3</sup> - Consumer: 6.22 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 75 mg/m<sup>3</sup> - Worker Professional: 75 mg/m<sup>3</sup> - Consumer: 18.66 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Industry: 0.208 mg/kg - Worker Professional: 0.208 mg/kg - Consumer: 0.125 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 0.624 mg/kg - Worker Professional: 0.624 mg/kg - Consumer: 0.375 mg/kg - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Consumer: 0.125 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

#### **formaldehyde - CAS: 50-00-0**

Worker Industry: 0.75 mg/m<sup>3</sup> - Worker Professional: 0.75 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 9 mg/m<sup>3</sup> - Worker Professional: 9 mg/m<sup>3</sup> - Consumer: 3.2 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 0.375 mg/m<sup>3</sup> - Worker Professional: 0.375 mg/m<sup>3</sup> - Consumer: 0.1 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 240 mg/kg - Worker Professional: 240 mg/kg - Consumer: 102 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 4.1 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

#### **triethylamine - CAS: 121-44-8**

Worker Industry: 8.4 mg/m<sup>3</sup> - Worker Professional: 8.4 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 12.1 mg/kg - Worker Professional: 12.1 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 12.6 mg/m<sup>3</sup> - Worker Professional: 12.6 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

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## **toluene - CAS: 108-88-3**

Worker Industry: 384 mg/kg - Worker Professional: 384 mg/kg - Consumer: 226 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 192 mg/m<sup>3</sup> - Worker Professional: 192 mg/m<sup>3</sup> - Consumer: 56.5 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 8.13 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Industry: 384 mg/m<sup>3</sup> - Worker Professional: 384 mg/m<sup>3</sup> - Consumer: 226 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short 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

### **ethyl acetate - CAS: 141-78-6**

Target: Marine water - Value: 0.024 mg/l

Target: Fresh Water - Value: 0.26 mg/l

Target: Freshwater sediments - Value: 1.25 mg/kg

Target: Microorganisms in sewage treatments - Value: 650 mg/l

Target: Soil (agricultural) - Value: 0.148 mg/kg

### **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: 0.0981 mg/kg

Target: Soil (agricultural) - Value: 0.0903 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

### **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

Target: Soil (agricultural) - Value: 28 mg/kg

### **butan-1-ol; n-butanol - CAS: 71-36-3**

Target: Fresh Water - Value: 0.082 mg/l

Target: Marine water - Value: 0.0082 mg/l

Target: Freshwater sediments - Value: 0.178 mg/l

Target: Soil (agricultural) - Value: 0.015 mg/kg

Target: Microorganisms in sewage treatments - Value: 2476 mg/l

### **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: Microorganisms in sewage treatments - Value: 100 mg/l

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

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## **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: Soil (agricultural) - Value: 0.0755 mg/kg

## **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

## **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

## **2-Pentanone oxime - CAS: 623-40-5**

Target: Fresh Water - Value: 0.088 mg/l - Notes:: Assessment factor: 1000

Target: Marine water - Value: 0.0088 mg/l - Notes:: Assessment factor: 1000

Target: Freshwater sediments - Value: 05 mg/kg

Target: Marine water sediments - Value: 0.05 mg/kg

Target: Soil (agricultural) - Value: 0.05 mg/kg

## **formaldehyde - CAS: 50-00-0**

Target: Fresh Water - Value: 0.44 mg/l

Target: Marine water - Value: 0.44 mg/l

Target: Freshwater sediments - Value: 2.3 mg/kg

Target: Microorganisms in sewage treatments - Value: 0.19 mg/l

Target: Soil (agricultural) - Value: 0.2 mg/kg

## **triethylamine - CAS: 121-44-8**

Target: Fresh Water - Value: 0.064 mg/l

Target: Marine water - Value: 0.0064 mg/l

Target: Freshwater sediments - Value: 0.1992 mg/kg

Target: Soil (agricultural) - Value: 2.361 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 mg/l

## **toluene - CAS: 108-88-3**

Target: Fresh Water - Value: 0.68 mg/l

Target: Marine water - Value: 0.68 mg/l

Target: Freshwater sediments - Value: 16.39 mg/kg

Target: Marine water sediments - Value: 16.39 mg/kg

Target: Soil (agricultural) - Value: 2.89 mg/kg

## **8.2 Exposure controls**

### **Eye protection:**

Eye glasses with side protection.

### **Protection for skin:**

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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:	Pigmented	--	--
Odour:	Characteristic	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	Flammable	--	--
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 noctanol/water (log value):	N.A.	--	--
Vapour pressure:	4.5 bar +/- 0.5 20 °C	--	--
Density and/or relative density:	0.80 +/- 0.05	--	--
Relative vapour density:	>1 (air=1)	--	--
Deformation Pressure:	15 bar	--	--
Explosion Pressure:	16 ÷ 20 bar	--	--
Volatile organic compounds - VOC	630 g/l	--	--
Volatile organic compounds - VOC	85%	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

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## 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.

### 10.5 Incompatible materials

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

### 10.6 Hazardous decomposition products

None.

## SECTION 11: Toxicological information

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

#### Toxicological information of the product:

##### INRAL HAMMER

##### 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

Not classified

Based on available data, the classification criteria are not met

##### e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

##### f) carcinogenicity

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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 > 20 ml/kg

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

**b) skin corrosion/irritation:**

Test: Skin Irritant Positive

**Hydrocarbons, C3-4; Petroleum gas - CAS: 68476-40-4**

**a) acute toxicity:**

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

Test: LC50 - Route: Inhalation - Species: Rat = 1442738 mg/m<sup>3</sup> - Duration: 15MIN

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

**ethyl acetate - CAS: 141-78-6**

**a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat > 5620 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 20000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 6000 ppm - Duration: 8h

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

**a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat = 10736 mg/kg - Source: (FEMALE)

Test: LD50 - Route: Skin - Species: Rabbit > 14000 mg/kg - Source: OCSE 402

Test: LC50 - Route: Inhalation - Species: Rat > 21.1 mg/l - Duration: 4h - Source: OCSE 403

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

**a) acute toxicity**

ATE - Oral 1200 mg/kg bw

Test: LC50 - Route: Inhalation - Species: Rat = 20 ppm - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat = 1746 mg/kg

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

**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

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**Trade name: INRAL HAMMER**

Test: LC50 - Route: Inhalation - Species: Rat > 25000 mg/m<sup>3</sup> - Duration: 8h

**b) skin corrosion/irritation:**

Test: Skin Irritant - Species: Rabbit No

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

Test: Eye Irritant - Species: Rabbit Yes

**g) reproductive toxicity:**

Test: Reproductive Toxicity - Route: Oral - Species: Rabbit = 480 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

**butan-1-ol; n-butanol - CAS: 71-36-3**

**a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat = 2290 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 3430 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 17.7 mg/l - 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

Test: LC50 - Route: Inhalation - Species: Rat > 54.6 mg/l - Duration: 4h

Test: LC50 - Route: Inhalation Vapour - Species: Rat > 7000 ppm - Duration: 8h

**b) skin corrosion/irritation:**

Test: Skin Irritant - Species: Rat Negative

**d) respiratory or skin sensitisation:**

Test: Respiratory Sensitization No

**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

**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

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

**a) acute toxicity:**

Test: LC50 - Route: Inhalation - Species: Rat > 20 mg/l - Duration: 4h

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

Test: LD50 - Route: Skin - Species: Rabbit > 4200 ml/kg

**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

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**Trade name: INRAL HAMMER**

## **Silicon dioxide, chemically prepared [CAS-No. 112945-52-5 resp. 7631-86-9] - CAS: 7631-86-9**

### **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 > 0.139 mg/l - Duration: 4h

## **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics**

### **a) acute toxicity:**

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

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

## **2-Pentanone oxime - CAS: 623-40-5**

### **a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat = 1133 mg/kg - Source: OECD TG 425

Test: LC50 - Route: Inhalation - Species: Rat > 295 ppm - Duration: 4h - Source: OECD TG 403

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

Test: Skin Irritant - Route: Skin - Species: Rabbit Negative - Source: OCSE Nr.439

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

Test: Eye Irritant - Species: Rabbit Positive - Source: OECD TG 405

### **e) germ cell mutagenicity:**

Negative

### **g) reproductive toxicity:**

Test: NOAEL - Route: Oral - Species: Rat = 150 mg/kg bw

## **formaldehyde - CAS: 50-00-0**

### **a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat = 460 mg/kg bw

Test: LC50 - Route: Inhalation - Species: Rat = 463 ppm - Duration: 4h

Test: LC50 - Route: Skin - Species: Rabbit = 270 mg/l

## **triethylamine - CAS: 121-44-8**

### **a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat = 730 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 7.1 mg/l - Duration: 4h

Test: LD50 - Route: Skin - Species: Rabbit = 580 mg/kg

Test: LC50 - Route: Inhalation Vapour - Species: Rat = 14.4 mg/l - Duration: 1h

## **toluene - CAS: 108-88-3**

### **a) acute toxicity:**

Test: LD50 - Route: Oral - Species: Rat = 5000 mg/kg - Duration: 24H

Test: LD50 - Route: Skin - Species: Rabbit = 12267 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 25.7 mg/l - Duration: 4h

## **11.2 Information on other hazards**

Endocrine disrupting properties:

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

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Trade name: INRAL HAMMER

## SECTION 12: Ecological information

### 12.1 Toxicity

Adopt good working practices, so that the product is not released into the environment.  
WGK: 1

#### INRAL HAMMER

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

#### ethyl acetate - CAS: 141-78-6

##### a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 230 mg/l - Duration h: 96  
Endpoint: LC50 - Species: Algae = 5600 mg/l - Duration h: 48  
Endpoint: EC50 - Species: Daphnia = 165 mg/l - Duration h: 48

##### c) Bacteria toxicity:

Endpoint: EC50 = 5870 mg/l - Duration h: 0.25

#### 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

#### 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 = 911 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

#### 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

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**Trade name: INRAL HAMMER**

## **butan-1-ol; n-butanol - CAS: 71-36-3**

### **a) Aquatic acute toxicity:**

Endpoint: LC50 - Species: Fish = 1376 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 225 mg/l - Duration h: 96 - Notes: OECD TG 201

Endpoint: EC50 - Species: Daphnia = 1328 mg/l - Duration h: 48 - Notes: OECDTG 202

### **c) Bacteria toxicity:**

Endpoint: EC50 = 4390 mg/l - Notes: 17 d

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

### **a) Aquatic acute toxicity:**

Endpoint: LC50 - Species: Fish > 100 mg/l

Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 168

Endpoint: EC50 - Species: Daphnia > 21100 mg/l - Duration h: 48 - Notes: 21100-25900 mg/l

Endpoint: EC50 - Species: Fish = 20800 mg/l - Duration h: 96

## **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

## **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

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

### **a) Aquatic acute toxicity:**

Endpoint: EC50 - Species: Daphnia = 1 mg/l - Duration h: 24

Endpoint: LC50 - Species: Fish = 2.6 mg/l - Duration h: 96

Endpoint: NOEC - Species: Algae = 0.44 mg/l - Duration h: 73

### **b) Aquatic chronic toxicity:**

Endpoint: NOEC - Species: Daphnia = 1.57 mg/l - Duration h: 504

Endpoint: NOEC - Species: Fish > 1.3 mg/l - Duration h: 1344

## **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

## **Silicon dioxide, chemically prepared [CAS-No. 112945-52-5 resp. 7631-86-9] - CAS: 7631-86-9**

### **a) Aquatic acute toxicity:**

Endpoint: EC50 - Species: Daphnia > 1000 mg/l - Duration h: 24

Endpoint: LC50 - Species: Fish = 10000 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae > 10000 mg/l - Duration h: 72

## **Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics**

### **a) Aquatic acute toxicity:**

Endpoint: LC50 - Species: Fish > 100 mg/l

Endpoint: EC50 - Species: Daphnia > 100 mg/l

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**Trade name: INRAL HAMMER**

Endpoint: EC50 - Species: Algae > 100 mg/l

**b) Aquatic chronic toxicity:**

Endpoint: NOEC - Species: Fish > 0.1 mg/l

Endpoint: NOEC - Species: Daphnia > 0.1 mg/l

**c) Bacteria toxicity:**

Endpoint: EC50 > 100 mg/l

**2-Pentanone oxime - CAS: 623-40-5**

**a) Aquatic acute toxicity:**

Endpoint: NOEC - Species: Fish = 100 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 88 mg/l - Duration h: 72

Endpoint: NOEC - Species: Daphnia > 100 mg/l - Duration h: 48

**formaldehyde - CAS: 50-00-0**

**a) Aquatic acute toxicity:**

Endpoint: EC50 - Species: Algae = 4.89 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 6.7 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 5.8 mg/l - Duration h: 48

**triethylamine - CAS: 121-44-8**

**a) Aquatic acute toxicity:**

Endpoint: LC50 - Species: Fish = 36 mg/l - Duration h: 96 - Notes: (Metod: US EPA)

Endpoint: LC50 - Species: Daphnia = 17 mg/l - Duration h: 48 - Notes: (Metod: US EPA)

Endpoint: EC50 - Species: Algae = 8 mg/l - Duration h: 72 - Notes: (Metod: OECD TG 201)

**b) Aquatic chronic toxicity:**

Endpoint: NOEC - Species: Daphnia = 1.1 mg/l - Notes: 21 d

Endpoint: NOEC - Species: Algae = 1.1 mg/l - Duration h: 72

**toluene - CAS: 108-88-3**

**a) Aquatic acute toxicity:**

Endpoint: LC50 - Species: Fish = 5.5 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 3.78 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 134 mg/l - Duration h: 96

**b) Aquatic chronic toxicity:**

Endpoint: NOEC - Species: Fish = 1.4 mg/l - Notes: 40d

Endpoint: NOEC - Species: Daphnia = 0.74 mg/l - Notes: 7d

Endpoint: NOEC - Species: Algae = 10 mg/l - Duration h: 72

## 12.2 Persistence and degradability

None

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

Biodegradability: Readily biodegradable

**Hydrocarbons, C3-4; Petroleum gas - CAS: 68476-40-4**

Biodegradability: Readily biodegradable

**ethyl acetate - CAS: 141-78-6**

Biodegradability: Readily biodegradable

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

Biodegradability: Readily biodegradable

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# INRAL

**Trade name: INRAL HAMMER**

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

Biodegradability: Readily biodegradable

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

Biodegradability: Readily biodegradable

**butan-1-ol; n-butanol - CAS: 71-36-3**

Biodegradability: Readily biodegradable - %: 92

**isobutyl acetate - CAS: 110-19-0**

Biodegradability: Readily biodegradable

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

Biodegradability: Readily biodegradable

**2-Pentanone oxime - CAS: 623-40-5**

Biodegradability: Non-readily biodegradable

**toluene - CAS: 108-88-3**

Biodegradability: Readily biodegradable

## 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

**Hydrocarbons, C3-4; Petroleum gas - CAS: 68476-40-4**

Bioaccumulation: Not bioaccumulative

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

Test: BCF - Bioconcentration factor 15.3

Test: Kow - Partition coefficient 2.3

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

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

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

Test: Kow - Partition coefficient -0.43

**isobutyl acetate - CAS: 110-19-0**

Test: Kow - Partition coefficient 2.3

Test: BCF - Bioconcentration factor 15.3

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

Bioaccumulation: Not bioaccumulative

**formaldehyde - CAS: 50-00-0**

Test: Kow - Partition coefficient 0.35

**toluene - CAS: 108-88-3**

Test: BCF - Bioconcentration factor 90

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## 12.4 Mobility in soil

N.A.

## 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

## 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

## 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

### 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: -

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**Trade name: INRAL HAMMER**

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.

## 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)

**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:**

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**Trade name: INRAL HAMMER**

Restriction 28  
Restriction 48  
Restriction 72  
Restriction 75

**Where applicable, refer to the following regulatory provisions :**

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:**

ethyl acetate  
n-butyl acetate  
2-butoxyethanol; ethylene glycol monobutyl ether  
propan-2-ol; isopropyl alcohol; isopropanol  
butan-1-ol; n-butanol  
1-methoxy-2-propanol; monopropylene glycol methyl ether  
2-methoxy-1-methylethyl acetate  
xylene (mixture of isomers)  
toluene

## 15.3 VOC

Volatile organic compounds - VOCs = 680 g/l

Volatile organic compounds - VOCs = 85 %

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.

## 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.  
H332 Harmful if inhaled.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H261 In contact with water releases flammable gases.  
H228 Flammable solid.  
H335 May cause respiratory irritation.  
H318 Causes serious eye damage.

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H304 May be fatal if swallowed and enters airways.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H312 Harmful in contact with skin.  
H412 Harmful to aquatic life with long lasting effects.  
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure.  
H350 May cause cancer.  
H341 Suspected of causing genetic defects.  
H301 Toxic if swallowed.  
H311 Toxic in contact with skin.  
H331 Toxic if inhaled.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H361d Suspected of damaging the unborn child.

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 (Liq.)	2.5/L	Gases under pressure (Liquefied gas)
Flam. Liq. 2	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 Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Muta. 2	3.5/2	Germ cell mutagenicity, Category 2
Carc. 1B	3.6/1B	Carcinogenicity, Category 1B
Repr. 2	3.7/2	Reproductive toxicity, 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 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

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**Trade name: INRAL HAMMER**

This safety data sheet has been completely updated in compliance to Regulation 2020/878.

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
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.
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.