

## \*300925 - \*300930 - Vicinal diketones

### Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

##### 1.1. Product identifier

Code: \*300925 - \*300930  
Product name: Vicinal diketones R1a

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

Identified Uses	Industrial	Professional	Consumer
Reagent for analysis	✓	-	-

##### 1.3. Details of the supplier of the safety data sheet

Name: CDR SRL  
Full address: Via degli artigiani, 6  
District and Country: 50055 Ginestra Fiorentina - Lastra a Signa (Firenze)  
Italy  
Tel. 055871431  
Fax 0558714322

e-mail address of the competent person responsible for the Safety Data Sheet: info@cdrfoodlab.com

##### 1.4. Emergency telephone number

For urgent inquiries refer to: +39055871431 (08:00-17:00 UTC+1)

#### SECTION 2. Hazards identification

##### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

##### Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Serious eye damage, category 1	H318	Causes serious eye damage.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

##### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

## \*300925 - \*300930 - Vicinal diketones



Signal words:

Danger

Hazard statements:

**H225** Highly flammable liquid and vapour.  
**H318** Causes serious eye damage.  
**H336** May cause drowsiness or dizziness.

Precautionary statements:

**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P310** Immediately call a POISON CENTER / doctor / . . .  
**P370+P378** In case of fire: use . . . to extinguish.  
**P261** Avoid breathing dust / fume / gas / mist / vapours / spray.

**Contains:** 1-Naftolo  
PROPAN-2-OL

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>PROPAN-2-OL</b>		
CAS 67-63-0	94 ≤ x < 98	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
EC 200-661-7		
INDEX 603-117-00-0		
<b>1-Naftolo</b>		
CAS 90-15-3	5 ≤ x < 6	Acute Tox. 3 H311, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335
EC 201-969-4		
INDEX 604-029-00-5		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

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### SECTION 4. First aid measures

#### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

### SECTION 5. Firefighting measures

#### 5.1. Extinguishing media

##### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

##### UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

#### 5.2. Special hazards arising from the substance or mixture

##### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

#### 5.3. Advice for firefighters

##### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

##### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

### SECTION 6. Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

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Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### 6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Store at -20 ° C.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

DEU	Deutschland	TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits

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TLV-ACGIH

ACGIH 2018

PROPAN-2-OL					
Threshold Limit Value					
Type	Country	TWA/8h		STEL/15min	
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm
AGW	DEU	500	200	1000	400
MAK	DEU	500	200	1000	400
VLA	ESP	500	200	1000	400
VLEP	FRA			980	400
WEL	GBR	999	400	1250	500
TLV-ACGIH		492	200	983	400

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

## 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

### HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

### EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

### ENVIRONMENTAL EXPOSURE CONTROLS

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The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

### SECTION 9. Physical and chemical properties

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

Appearance	liquid
Colour	colourless
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 35 °C
Boiling range	Not available
Flash point	< 23 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Solubility	soluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

#### 9.2. Other information

Information not available

### SECTION 10. Stability and reactivity

#### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

#### 10.2. Chemical stability

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The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

1-Naftolo

Reacts violently with: strong bases, acid chlorides, acid anhydrides.

Reacts violently developing heat on contact with: strong oxidising agents.

### 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

### 10.5. Incompatible materials

Information not available

### 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### 11.1. Information on toxicological effects

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

#### Interactive effects

Information not available

#### ACUTE TOXICITY

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LC50 (Inhalation) of the mixture:  
Not classified (no significant component)  
LD50 (Oral) of the mixture:  
>2000 mg/kg  
LD50 (Dermal) of the mixture:  
>2000 mg/kg

PROPAN-2-OL

LD50 (Oral) 4710 mg/kg Rat

LD50 (Dermal) 12800 mg/kg Rat

LC50 (Inhalation) 72,6 mg/l/4h Rat

1-Naftolo

LD50 (Oral) 1870 mg/kg Ratto

LD50 (Dermal) 880 mg/kg Coniglio

### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

### STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

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### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

### 12.1. Toxicity

1-Naftolo

EC50 - for Crustacea

4,33 mg/l/48h Cavedano americano

### 12.2. Persistence and degradability

PROPAN-2-OL

Rapidly degradable

### 12.3. Bioaccumulative potential

PROPAN-2-OL

Partition coefficient: n-octanol/water

0,05

### 12.4. Mobility in soil

Information not available

### 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

### 12.6. Other adverse effects

Information not available

## SECTION 13. Disposal considerations

### 13.1. Waste treatment methods

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Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

### SECTION 14. Transport information

#### 14.1. UN number

ADR / RID, IMDG, 1987  
IATA:

#### 14.2. UN proper shipping name

ADR / RID: ALCOHOLS, N.O.S. (PROPAN-2-OL)  
 IMDG: ALCOHOLS, N.O.S. (PROPAN-2-OL)  
 IATA: ALCOHOLS, N.O.S. (PROPAN-2-OL)

#### 14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3  
 IMDG: Class: 3 Label: 3  
 IATA: Class: 3 Label: 3



#### 14.4. Packing group

ADR / RID, IMDG, II  
IATA:

#### 14.5. Environmental hazards

ADR / RID: NO  
 IMDG: NO  
 IATA: NO

#### 14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 1 L	Tunnel restriction code: (D/E)
	Special Provision: 640D		
IMDG:	EMS: F-E, S-D	Limited Quantities: 1 L	

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IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 353
	Special Instructions:	A3, A180	

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product Point 3 - 40

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

### 15.2. Chemical safety assessment

## \*300925 - \*300930 - Vicinal diketones

No chemical safety assessment has been processed for the mixture and the substances it contains.

### SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Acute Tox. 3</b>	Acute toxicity, category 3
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H311</b>	Toxic in contact with skin.
<b>H302</b>	Harmful if swallowed.
<b>H318</b>	Causes serious eye damage.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H336</b>	May cause drowsiness or dizziness.

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

## **\*300925 - \*300930 - Vicinal diketones**

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

### Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

## \*300925 - \*300930 - Vicinal diketones

### Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

##### 1.1. Product identifier

Code: \*300925 - \*300930  
Product name: Vicinal diketones R2

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

Identified Uses	Industrial	Professional	Consumer
Reagent for analysis	✓	-	-

##### 1.3. Details of the supplier of the safety data sheet

Name: CDR SRL  
Full address: Via degli artigiani, 6  
District and Country: 50055 Ginestra Fiorentina - Lastra a Signa (Firenze)  
Italy  
Tel. 055871431  
Fax 0558714322

e-mail address of the competent person responsible for the Safety Data Sheet: info@cdrfoodlab.com

##### 1.4. Emergency telephone number

For urgent inquiries refer to: +39055871431 (08:00-17:00 UTC+1)

#### SECTION 2. Hazards identification

##### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.

##### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

## \*300925 - \*300930 - Vicinal diketones



Signal words:

Danger

Hazard statements:

**H302** Harmful if swallowed.  
**H314** Causes severe skin burns and eye damage.

Precautionary statements:

**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P310** Immediately call a POISON CENTER / doctor / . . .  
**P264** Wash . . . thoroughly after handling.

**Contains:** POTASSIUM HYDROXIDE

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>POTASSIUM HYDROXIDE</b>		
CAS 1310-58-3	27 ≤ x < 28,5	Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1A H314, Eye Dam. 1 H318
EC 215-181-3		
INDEX 019-002-00-8		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

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**INGESTION:** Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

**INHALATION:** Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

## **SECTION 5. Firefighting measures**

### **5.1. Extinguishing media**

#### **SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

#### **UNSUITABLE EXTINGUISHING EQUIPMENT**

None in particular.

### **5.2. Special hazards arising from the substance or mixture**

#### **HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

### **5.3. Advice for firefighters**

#### **GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### **SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## **SECTION 6. Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### **6.2. Environmental precautions**

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### **6.3. Methods and material for containment and cleaning up**

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder



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with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Conservare a -20°C.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
	TLV-ACGIH	ACGIH 2018

### POTASSIUM HYDROXIDE

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm
VLA	ESP			2	
VLEP	FRA			2	
WEL	GBR			2	
TLV-ACGIH				2 (C)	

Legend:

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(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

### 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

#### HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

#### EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

#### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## SECTION 9. Physical and chemical properties

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

Appearance	liquid
Colour	colourless
Odour	characteristic
Odour threshold	Not available
pH	14
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available

## **\*300925 - \*300930 - Vicinal diketones**

Flash point	> 60 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,17
Solubility	soluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

### **9.2. Other information**

Information not available

## **SECTION 10. Stability and reactivity**

### **10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

POTASSIUM HYDROXIDE

May develop: heat. May corrode: metals.

### **10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

POTASSIUM HYDROXIDE

Stable in normal conditions of use and storage.

### **10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

POTASSIUM HYDROXIDE

## **\*300925 - \*300930 - Vicinal diketones**

Develops hydrogen on contact with: metals. Develops heat on contact with: strong acids. Reacts violently with: water.

### **10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

#### POTASSIUM HYDROXIDE

Avoid exposure to: sources of heat. Keep away from: oxidising agents, acids, flammable substances, halogens, organic substances. Keep away from: lead, aluminium, copper, tin, sulphur, bronze. Absorbs atmospheric CO<sub>2</sub>.

Unstable on exposure to air. Freezing.

### **10.5. Incompatible materials**

Information not available

### **10.6. Hazardous decomposition products**

#### POTASSIUM HYDROXIDE

May develop: flammable gases.

## **SECTION 11. Toxicological information**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### **11.1. Information on toxicological effects**

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

#### Interactive effects

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Information not available

### ACUTE TOXICITY

LC50 (Inhalation) of the mixture:  
Not classified (no significant component)  
LD50 (Oral) of the mixture:  
1168,42 mg/kg  
LD50 (Dermal) of the mixture:  
Not classified (no significant component)

### POTASSIUM HYDROXIDE

LD50 (Oral) 333 mg/kg Rat

### SKIN CORROSION / IRRITATION

Corrosive for the skin

### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

### ASPIRATION HAZARD

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Does not meet the classification criteria for this hazard class

### **SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

#### **12.1. Toxicity**

Information not available

#### **12.2. Persistence and degradability**

POTASSIUM HYDROXIDE

Solubility in water

> 10000 mg/l

Degradability: information not available

#### **12.3. Bioaccumulative potential**

Information not available

#### **12.4. Mobility in soil**

Information not available

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

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

#### **12.6. Other adverse effects**

Information not available

### **SECTION 13. Disposal considerations**

#### **13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

### **SECTION 14. Transport information**

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### 14.1. UN number

ADR / RID, IMDG, 1814  
IATA:

### 14.2. UN proper shipping name

ADR / RID: POTASSIUM HYDROXIDE SOLUTION  
 IMDG: POTASSIUM HYDROXIDE SOLUTION  
 IATA: POTASSIUM HYDROXIDE SOLUTION

### 14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8  
 IMDG: Class: 8 Label: 8  
 IATA: Class: 8 Label: 8



### 14.4. Packing group

ADR / RID, IMDG, II  
IATA:

### 14.5. Environmental hazards

ADR / RID: NO  
 IMDG: NO  
 IATA: NO

### 14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
		Maximum quantity: 30 L	Packaging instructions: 855
IATA:	Cargo:	Maximum quantity: 1 L	Packaging instructions: 851
	Pass.:	Maximum quantity: 1 L	
	Special Instructions:	A3, A803	

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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Information not relevant

### SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

<u>Product</u>	
Point	3

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

### SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Met. Corr. 1</b>	Substance or mixture corrosive to metals, category 1
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<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Skin Corr. 1A</b>	Skin corrosion, category 1A
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>H290</b>	May be corrosive to metals.
<b>H302</b>	Harmful if swallowed.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website

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- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.