

Phenol

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 12/04/2017

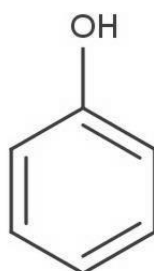
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : Phenol
EC Index-No. : 604-001-00-2
EC-No. : 203-632-7
CAS-No. : 108-95-2
Type of product : Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only
Formula : C₆H₆O
Chemical structure :



Synonyms : benzaphenol, solid / benzene phenol, solid / benzenol, solid / benzophenol, solid / carbolic acid / carboic acid, crystals / carboic acid, solid / cresote, solid / hydroxybenzene, solid / monohydroxybenzene / monophenol, solid / oxybenzene, solid / phenic acid, solid / phenic alcohol, solid / phenol / phenol alcohol, solid / phenol usp, crystals / phenol usp, solid / phenol, crystal / phenol, loose crystals / phenol, pure / Phenol, solid / phenyl alcohol, solid / phenyl hydrate, solid / phenyl hydroxide, solid / phenylalcohol / phenylic acid, solid / phenylic alcohol, solid

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Disinfectant
Solvent
Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ISOLAB Laborgeräte GmbH
Am Dillhof 2 - 63863 Eschau / GERMANY
Tel: + 49 93 74 / 978 55-0
Fax: +49 93 74 / 978 55-29
prodsafe@isolab.de

1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|---|-----------------------------------|------------------|---------|
| Germany | Giftnotruf der Charité CBF, Haus VIII (Wirtschaftsgebäude), UG | Hindenburgdamm 30 12203 Berlin | +49 30 19240 | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Muta. 2 H341
Acute Tox. 3 (Inhalation) H331
Acute Tox. 3 (Dermal) H311
Acute Tox. 3 (Oral) H301
STOT RE 2 H373
Skin Corr. 1B H314

Full text of hazard classes and H-statements : see section 16

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Specific concentration limits:

- (1 =<C < 3) Skin Irrit. 2, H315
- (1 =<C < 3) Eye Irrit. 2, H319
- (C >= 3) Skin Corr. 1B, H314

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

- H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled
- H314 - Causes severe skin burns and eye damage
- H341 - Suspected of causing genetic defects
- H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (CLP) :

- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P310 - IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

| Name | Product identifier | % |
|--------|---|-----|
| Phenol | (CAS-No.) 108-95-2 (EC-No.) 203-632-7 (EC Index-No.) 604-001-00-2 | 100 |

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

- : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.

First-aid measures after inhalation

- : Remove the victim into fresh air. Do not apply mouth-to-mouth resuscitation. Immediately consult a doctor/medical service.

First-aid measures after skin contact

- : Wash immediately with PE-glycol 400. Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact

- : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

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First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give chemical antidote. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation : ON CONTINUOUS EXPOSURE/CONTACT: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Dry/sore throat. Coughing. Respiratory difficulties. Rapid respiration. Dizziness. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible laryngeal spasm/oedema. Risk of pneumonia. Risk of lung oedema.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin. Destruction of tissue. Feeling of weakness. Tremor. Coordination disorders. Shock. Disturbances of consciousness. Cramps/uncontrolled muscular contractions.

Symptoms/effects after eye contact : Corrosion of the eye tissue. Permanent eye damage.

Symptoms/effects after ingestion : Burns to the gastric/intestinal mucosa. Nausea. Abdominal pain. Diarrhoea. Low arterial pressure. Shock. Disturbances of consciousness. Respiratory collapse. FOLLOWING SYMPTOMS MAY APPEAR LATER: Disturbed sensation of pain. Enlargement/affection of the liver. Decreased renal function. Change in urine output. Urine discolouration. Methemoglobinemia.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. May stain the skin. Feeling of weakness. Headache. Difficulty in swallowing. Gastrointestinal complaints. Loss of appetite. Affection of the renal tissue. Urine discolouration. Increased salivation. Enlargement/affection of the liver. Central nervous system depression. Dizziness. Impaired concentration.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Preferably: water spray. Polyvalent foam. Alcohol-resistant foam. Water. ABC powder. Carbon dioxide.

Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Material presenting a fire hazard. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : DIRECT EXPLOSION HAZARD. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark. Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen apparatus. See "Material-Handling" to select protective clothing.

Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Corrosion-proof appliances. Wash contaminated clothes. In case of reactivity hazard: consider evacuation.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. Dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water. Powdered form: no compressed air for pumping over spills.
- Methods for cleaning up : Cover the solid spill with dry sand/earth/vermiculite soda ash or powdered limestone. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Pulverization rapidly increases toxic concentration.
- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosionproof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

7.2. Conditions for safe storage, including any incompatibilities

- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: many substances. oxidizing agents. (strong) acids. (strong) bases. metals. halogens. water/moisture.
- Storage area : Store in a dry area. Store in a dark area. Ventilation at floor level. Keep locked up. Unauthorized persons are not admitted. Under a shelter/in the open. May be stored under nitrogen. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: steel. stainless steel. nickel. polypropylene. glass. MATERIAL TO AVOID: lead. aluminium. iron. copper. zinc. bronze. tin.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Phenol (108-95-2) | | |
|-------------------|---|--|
| EU | Local name | Phenol |
| EU | IOELV TWA (mg/m ³) | 8 mg/m ³ (Phenol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value) |
| EU | IOELV TWA (ppm) | 2 ppm (Phenol; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value) |
| EU | IOELV STEL (mg/m ³) | 16 mg/m ³ (Phenol; EU; Short time value; Indicative occupational exposure limit value) |
| EU | IOELV STEL (ppm) | 4 ppm (Phenol; EU; Short time value; Indicative occupational exposure limit value) |
| EU | Notes | skin |
| Austria | Local name | Phenol |
| Austria | MAK (mg/m ³) | 8 mg/m ³ |
| Austria | MAK (ppm) | 2 ppm |
| Austria | MAK Short time value (mg/m ³) | 16 mg/m ³ |
| Austria | MAK Short time value (ppm) | 4 ppm |
| Austria | Remark (AT) | H |
| Belgium | Local name | Phénol # Fenol |
| Belgium | Limit value (mg/m ³) | 8 mg/m ³ (Phénol; Belgium; Time-weighted average exposure limit 8 h) |

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| Phenol (108-95-2) | | |
|-------------------|--|---|
| Belgium | Limit value (ppm) | 2 ppm (Phénol; Belgium; Time-weighted average exposure limit 8 h) |
| Belgium | Short time value (mg/m ³) | 16 mg/m ³ (Phénol; Belgium; Short time value) |
| Belgium | Short time value (ppm) | 4 ppm (Phénol; Belgium; Short time value) |
| Belgium | Remark (BE) | D: La mention D signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # De vermelding D betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht. |
| Bulgaria | Local name | Фенол |
| Bulgaria | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Bulgaria | OEL TWA (ppm) | 2 ppm |
| Bulgaria | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Bulgaria | OEL STEL (ppm) | 4 ppm |
| Bulgaria | Notes | Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност) |
| Croatia | Local name | Fenol |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 8 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (ppm) | 2 ppm |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 16 mg/m ³ |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (ppm) | 4 ppm |
| Croatia | Naznake (HR) | Skin; EU*** (naznaka da se radi o tvarima za koje su utvrđene indikativne granične vrijednosti izloženosti prema Direktivi 2009/161/ EU (treća lista)); K (Skin); (naznaka da tvar može štetno djelovati kroz kožu); T (otrovno); C (nagrizajuće) |
| Czech Republic | Local name | Fenol |
| Czech Republic | Expoziční limity (PEL) (mg/m ³) | 7.5 mg/m ³ |
| Czech Republic | Expoziční limity (PEL) (ppm) | 2 ppm |
| Czech Republic | Expoziční limity (NPK-P) (mg/m ³) | 15 mg/m ³ |
| Czech Republic | Expoziční limity (NPK-P) (ppm) | 4 ppm |
| Czech Republic | Remark (CZ) | D |
| Denmark | Local name | Phenol |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 4 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (ppm) | 1 ppm |
| Denmark | Anmærkninger (DK) | E (betyder, at stoffet har en EF-grænseværdi); H (betyder, at stoffet kan optages gennem huden) |
| Estonia | Local name | Fenool (hüdroksübenseen) |
| Estonia | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Estonia | OEL TWA (ppm) | 2 ppm |
| Estonia | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Estonia | OEL STEL (ppm) | 4 ppm |
| Finland | Local name | Fenoli |
| Finland | HTP-arvo (8h) (mg/m ³) | 8 mg/m ³ |
| Finland | HTP-arvo (8h) (ppm) | 2 ppm |
| Finland | HTP-arvo (15 min) | 16 mg/m ³ |

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| Phenol (108-95-2) | | |
|-------------------|---|---|
| Finland | HTP-arvo (15 min) (ppm) | 4 ppm |
| Finland | Huomautus (FI) | iho |
| France | Local name | Phénol |
| France | VME (mg/m ³) | 7.8 mg/m ³ (Phénol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante) |
| France | VME (ppm) | 2 ppm (Phénol; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante) |
| France | VLE (mg/m ³) | 15.6 mg/m ³ (Phénol; France; Short time value; VRC: Valeur réglementaire contraignante) |
| France | VLE (ppm) | 4 ppm (Phénol; France; Short time value; VRC: Valeur réglementaire contraignante) |
| France | Note (FR) | Valeurs réglementaires contraignantes; risque de pénétration percutanée; substance classée mutagène de catégorie 2 |
| Germany | Local name | Phenol |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 8 mg/m ³ |
| Germany | TRGS 900 Occupational exposure limit value (ppm) | 2 ppm |
| Germany | Remark (TRGS 900) | EU,H,11 |
| Gibraltar | Eight hours mg/m ³ | 7.8 mg/m ³ |
| Gibraltar | Eight hours ppm | 2 ppm |
| Gibraltar | Name of agent | Phenol |
| Gibraltar | Notation | Skin |
| Greece | OEL TWA (mg/m ³) | 19 mg/m ³ |
| Greece | OEL TWA (ppm) | 5 ppm |
| Greece | OEL STEL (mg/m ³) | 38 mg/m ³ |
| Greece | OEL STEL (ppm) | 10 ppm |
| Hungary | Local name | FENOL |
| Hungary | AK-érték | 8 mg/m ³ |
| Hungary | CK-érték | 16 mg/m ³ |
| Hungary | Megjegyzések (HU) | b, m; l. |
| Ireland | Local name | Phenol |
| Ireland | OEL (8 hours ref) (mg/m ³) | 8 mg/m ³ |
| Ireland | OEL (8 hours ref) (ppm) | 2 ppm |
| Ireland | OEL (15 min ref) (mg/m ³) | 16 mg/m ³ |
| Ireland | OEL (15 min ref) (ppm) | 4 ppm |
| Ireland | Notes (IE) | Sk, IOELV |
| Italy | Local name | Fenolo |
| Italy | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Italy | OEL TWA (ppm) | 2 ppm |
| Italy | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Italy | OEL STEL (ppm) | 4 ppm |
| Latvia | Local name | Fenols(hidroksibenzols) |
| Latvia | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Latvia | OEL TWA (ppm) | 2 ppm |
| Latvia | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Latvia | OEL STEL (ppm) | 4 ppm |
| Lithuania | Local name | Fenolis |
| Lithuania | IPRV (mg/m ³) | 8 mg/m ³ |
| Lithuania | IPRV (ppm) | 2 ppm |
| Lithuania | TPRV (mg/m ³) | 16 mg/m ³ |
| Lithuania | TPRV (ppm) | 4 ppm |

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|--------------------------|---|--|
| Lithuania | Remark (LT) | O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą) |
| Luxembourg | Local name | Phénol |
| Luxembourg | OEL TWA (mg/m ³) | 7.8 mg/m ³ |
| Luxembourg | OEL TWA (ppm) | 2 ppm |
| Malta | Local name | Phenol |
| Malta | OEL TWA (mg/m ³) | 7.8 mg/m ³ |
| Malta | OEL TWA (ppm) | 2 ppm |
| Netherlands | Local name | Fenol |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 8 mg/m ³ (Fenol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value) |
| Netherlands | Grenswaarde TGG 8H (ppm) | 2 ppm (Fenol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value) |
| Netherlands | Remark (MAC) | H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een Haanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen. |
| Poland | Local name | Fenol |
| Poland | NDS (mg/m ³) | 7.8 mg/m ³ |
| Poland | NDSch (mg/m ³) | 16 mg/m ³ |
| Portugal | Local name | Fenol |
| Portugal | OEL TWA (ppm) | 5 ppm |
| Romania | Local name | Fenol |
| Romania | OEL TWA (mg/m ³) | 7.8 mg/m ³ |
| Romania | OEL TWA (ppm) | 2 ppm |
| Slovakia | Local name | Fenol |
| Slovakia | NPHV (priemerná) (mg/m ³) | 8 mg/m ³ |
| Slovakia | NPHV (priemerná) (ppm) | 2 ppm |
| Slovakia | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Slovakia | OEL STEL (ppm) | 4 ppm |
| Slovakia | Upozornenie (SK) | K - znamená, že faktor môže byť ľahko absorbovaný kožou |
| Slovenia | Local name | fenol |
| Slovenia | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Slovenia | OEL TWA (ppm) | 2 ppm |
| Slovenia | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Slovenia | OEL STEL (ppm) | 4 ppm |
| Spain | Local name | Fenol |
| Spain | VLA-ED (mg/m ³) | 8 mg/m ³ |
| Spain | VLA-ED (ppm) | 2 ppm |
| Spain | VLA-EC (mg/m ³) | 16 mg/m ³ |
| Spain | VLA-EC (ppm) | 4 ppm |

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| Spain | Notes | Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 de este documento), VLB® (Agente químico que tiene Valor Límite Biológico específico en este documento), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país). |
| Sweden | Local name | Fenol |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 4 mg/m ³ |
| Sweden | nivågränsvärde (NVG) (ppm) | 1 ppm |
| Sweden | kortidsvärde (KTV) (mg/m ³) | 16 mg/m ³ |
| Sweden | kortidsvärde (KTV) (ppm) | 4 ppm |
| Sweden | Anmärkning (SE) | H (Ämnet kan lätt upptas genom huden. Det föreskrivna gränsvärdet bedöms ge tillräckligt skydd endast under förutsättning att huden är skyddad mot exponering för ämnet ifråga); M (Medicinska kontroller kan krävas för hantering av ämnet. Se vidare föreskrifterna om medicinska kontroller i arbetslivet. För vissa ämnen ska arbetsgivaren erbjuda läkarundersökning och för andra ämnen gäller krav på periodisk läkarundersökning och tjänstbarhetsbedömning. Se föreskrifterna om kemiska arbetsmiljörisker); 21 (I ångform kan ämnet i betydande grad upptas genom huden) |
| United Kingdom | Local name | Phenol |
| United Kingdom | WEL TWA (mg/m ³) | 7.8 mg/m ³ Phenol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005) |
| United Kingdom | WEL TWA (ppm) | 2 ppm Phenol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005) |
| United Kingdom | WEL STEL (mg/m ³) | 16 mg/m ³ Phenol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005) |
| United Kingdom | WEL STEL (ppm) | 4 ppm Phenol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005) |
| United Kingdom | Remark (WEL) | Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity) |
| Iceland | Local name | Fenól |
| Iceland | OEL (8 hours ref) (mg/m ³) | 4 mg/m ³ |
| Iceland | OEL (8 hours ref) (ppm) | 1 ppm |
| Iceland | Notes (IS) | H |
| Russian Federation | Local name | Гидроксibenзол+ |
| Russian Federation | OEL Ceiling (mg/m ³) | 1 mg/m ³ |
| Russian Federation | OEL TWA (mg/m ³) | 0.3 mg/m ³ |
| Russian Federation | Remark (RU) | 2 класс опасности - высокоопасное; n (пары и/или газы); + (соединения, при работе с которыми требуется специальная защита кожи и глаз; символ проставлен вслед за наименованием вещества) |

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| Phenol (108-95-2) | | |
|-------------------|--|--|
| Norway | Local name | Fenol |
| Norway | Grenseverdier (AN) (mg/m ³) | 4 mg/m ³ |
| Norway | Grenseverdier (AN) (ppm) | 1 ppm |
| Norway | Grenseverdier (Korttidsverdi) (mg/m ³) | 12 mg/m ³ |
| Norway | Grenseverdier (Korttidsverdi) (ppm) | 3 ppm |
| Norway | Merknader (NO) | H (Kjemikalier som kan tas opp gjennom huden); E (EU har en veiledende grenseverdi for stoffet); S (Korttidsverdi er en verdi for gjennomsnittskonsentrasjonen av et kjemisk stoff i pustesonen til en arbeidstaker som ikke skal overskrides i en fastsatt referanseperiode. Referanseperioden er 15 minutter hvis ikke annet er oppgitt) |
| Switzerland | Local name | Phenol |
| Switzerland | VME (mg/m ³) | 19 mg/m ³ |
| Switzerland | VME (ppm) | 5 ppm |
| Switzerland | VLE (mg/m ³) | 19 mg/m ³ |
| Switzerland | VLE (ppm) | 5 ppm |
| Switzerland | Remark (CH) | H B M2 - OAW, Lunge, ZNS - DFG, INRS, NIOSH, OSHA |
| Turkey | Local name | Fenol |
| Turkey | OEL TWA (mg/m ³) | 8 mg/m ³ |
| Turkey | OEL TWA (ppm) | 2 ppm |
| Turkey | OEL STEL (mg/m ³) | 16 mg/m ³ |
| Turkey | OEL STEL (ppm) | 4 ppm |
| Turkey | Comments | Deri |
| Australia | Local name | Phenol |
| Australia | TWA (mg/m ³) | 4 mg/m ³ |
| Australia | TWA (ppm) | 1 ppm |
| Australia | Remark (AU) | Sk - Absorption through the skin may be a significant source of exposure. |
| USA - ACGIH | Local name | Phenol |
| USA - ACGIH | ACGIH TWA (ppm) | 5 ppm (Phenol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| USA - ACGIH | Remark (ACGIH) | URT irr; lung dam; CNS impair |
| USA - OSHA | Local name | Phenol |
| USA - OSHA | OSHA PEL (TWA) (mg/m ³) | 19 mg/m ³ |
| USA - OSHA | OSHA PEL (TWA) (ppm) | 5 ppm |

8.2. Exposure controls

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: viton. GIVE GOOD RESISTANCE: butyl rubber, tetrafluoroethylene. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: natural rubber, nitrile rubber, polyethylene, PVA, PVC, neoprene/natural rubber, nitrile rubber/PVC

Hand protection:

Gloves

Eye protection:

Face shield. In case of dust production: protective goggles

| Type | Use | Characteristics | Standard |
|-------------|-----------------|-----------------|----------|
| Face shield | Dust, Fine dust | Dust protection | |

Skin and body protection:

Corrosion-proof clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection:

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Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus

| Device | Filter type | Condition | Standard |
|---|-------------|----------------------|----------|
| Dust mask | Type P3 | Dust protection | |
| Self-contained breathing apparatus (SCBA) | Type P3 | High dust protection | |



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Solid |
| Appearance | : Crystalline solid. Needles. |
| Molecular mass | : 94.11 g/mol |
| Colour | : Pure substance: colourless to white. On exposure to air: rose to brown. |
| Odour | : Irritating/pungent odour. Sweet odour. Aromatic odour. |
| Odour threshold | : 0.06 ppm 0.2 mg/m ³ |
| pH | : 5 (50 g/l, H ₂ O, 20 °C) |
| Relative evaporation rate (butylacetate=1) | : < 0.03 |
| Melting point | : 38 - 43 °C |
| Freezing point | : No data available |
| Boiling point | : 181.8 °C (1013 hPa) |
| Flash point | : 79 °C |
| Critical temperature | : 421 °C |
| Auto-ignition temperature | : 715 °C (1013 hPa) |
| Decomposition temperature | : 800 °C |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : 0.2 hPa (20 °C) |
| Vapour pressure at 50 °C | : 3.3 hPa (50 °C) |
| Critical pressure | : 61286 hPa |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : 1.06 (25 °C) |
| Relative density of saturated gas/air mixture | : 1 |
| Density | : 1060 kg/m ³ |
| Solubility | : Moderately soluble in water. Soluble in ethanol. Soluble in methanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in acetic acid. Soluble in carbon disulfide. Soluble in sodium hydroxide solution. Soluble in glycerol. Soluble in acids. Soluble in halogenated hydrocarbons. Soluble in dimethyl sulfoxide. Soluble in dimethylformamide. Soluble in oils/fats. Water: 8.4 g/100ml (20 °C) Ethanol: > 10 g/100ml Acetone: Complete |
| Log Pow | : 1.47 (Experimental value; Equivalent or similar to OECD 117; 30 °C) |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : 0.0041 Pa.s (45 °C; 0.0034 Pa.s; 50 °C) |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 1.3 - 9.5 vol % 50 - 370 g/m ³ |

9.2. Other information

| | |
|--------------------------|-------------------------|
| Minimum ignition energy | : 0.25 mJ (100kPa) |
| Specific conductivity | : 2.4 µS/m |
| Saturation concentration | : 0.77 g/m ³ |

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VOC content : 100 %
Other properties : Hygroscopic. Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts on exposure to temperature rise with (some) metals. At very high temperature: decomposes: release of highly flammable gases/vapours (hydrogen). Upon combustion: CO and CO₂ are formed. Decomposes slowly on exposure to air. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Violent to explosive reaction with many compounds e.g.: with (some) acids/bases.

10.2. Chemical stability

Hygroscopic. Discolours on exposure to light. Discolours on exposure to air.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation: Toxic if inhaled. Dermal: Toxic in contact with skin. Oral: Toxic if swallowed.

| Phenol (108-95-2) | |
|----------------------------|--------------------------------------|
| LD50 oral rat | 317 mg/kg (Rat) |
| LD50 dermal rabbit | 850 mg/kg (Rabbit) |
| LC50 inhalation rat (mg/l) | 0.32 mg/l/4h (Rat; Literature study) |

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 6

Serious eye damage/irritation : Serious eye damage, category 1, implicit
pH: 6

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

IARC group : 3

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/l.

Ecology - water : Ground water pollutant. Toxic to fishes. Toxic to invertebrates (Daphnia). Harmful to algae. Highly toxic to plankton.

| Phenol (108-95-2) | |
|--------------------------------|---|
| LC50 other aquatic organisms 1 | 0.04 mg/l (4 days; Rana sp.; LC50) |
| EC50 Daphnia 2 | 6.6 mg/l (EC50; 48 h; Daphnia magna; Static system) |

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12.2. Persistence and degradability

| Phenol (108-95-2) | |
|---------------------------------|---|
| Persistence and degradability | Readily biodegradable in water. Photolysis in water. Readily biodegradable in the soil. Inhibits biodegradation processes in the soil. Low potential for adsorption in soil. Photooxidation in the air. |
| Biochemical oxygen demand (BOD) | 1.68 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 2.28 g O ₂ /g substance |
| ThOD | 2.38 g O ₂ /g substance |
| BOD (% of ThOD) | 0.71 |

12.3. Bioaccumulative potential

| Phenol (108-95-2) | |
|---------------------------|---|
| Log Pow | 1.47 (Experimental value; Equivalent or similar to OECD 117; 30 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

12.4. Mobility in soil

| Phenol (108-95-2) | |
|-------------------|--------------------|
| Surface tension | 0.0713 N/m (20 °C) |

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

European List of Waste (LoW) code : 07 06 04* - other organic solvents, washing liquids and mother liquors

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 14.1. UN number | | | | |
| 1671 | 1671 | 1671 | 1671 | 1671 |
| 14.2. UN proper shipping name | | | | |
| PHENOL, SOLID | PHENOL, SOLID | Phenol, solid | PHENOL, SOLID | PHENOL, SOLID |
| Transport document description | | | | |
| UN 1671 PHENOL, SOLID, 6.1, II, (D/E) | UN 1671 PHENOL, SOLID, 6.1, II | UN 1671 Phenol, solid, 6.1, II | UN 1671 PHENOL, SOLID, 6.1, II | UN 1671 PHENOL, SOLID, 6.1, II |
| 14.3. Transport hazard class(es) | | | | |
| 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| | | | | |
| 14.4. Packing group | | | | |
| II | II | II | II | II |
| 14.5. Environmental hazards | | | | |
| Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No |

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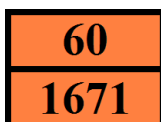


| ADR | IMDG | IATA | ADN | RID |
|--|-----------------------|------|-----|-----|
| | Marine pollutant : No | | | |
| No supplementary information available | | | | |

14.6. Special precautions for user

- Overland transport

| | |
|---|---------------|
| Classification code (ADR) | : T2 |
| Special provisions (ADR) | : 279 |
| Limited quantities (ADR) | : 500g |
| Excepted quantities (ADR) | : E4 |
| Packing instructions (ADR) | : P002, IBC08 |
| Mixed packing provisions (ADR) | : MP10 |
| Portable tank and bulk container instructions (ADR) | : T3 |
| Portable tank and bulk container special provisions (ADR) | : TP33 |
| Tank code (ADR) | : SGAH |
| Tank special provisions (ADR) | : TU15, TE19 |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 2 |
| Special provisions for carriage - Packages (ADR) | : V11 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV13, CV28 |
| Special provisions for carriage - Operation (ADR) | : S9, S19 |
| Hazard identification number (Kemler No.) | : 60 |
| Orange plates | : |



| | |
|-------------------------------|-------|
| Tunnel restriction code (ADR) | : D/E |
| EAC code | : 2X |

- Transport by sea

| | |
|------------------------------------|--|
| Transport regulations (IMDG) | : Subject |
| Special provisions (IMDG) | : 279 |
| Limited quantities (IMDG) | : 500 g |
| Excepted quantities (IMDG) | : E4 |
| Packing instructions (IMDG) | : P002 |
| IBC packing instructions (IMDG) | : IBC08 |
| IBC special provisions (IMDG) | : B2, B4 |
| Tank instructions (IMDG) | : T3 |
| Tank special provisions (IMDG) | : TP33 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-A |
| Stowage category (IMDG) | : A |
| Properties and observations (IMDG) | : Colourless or white crystals or crystallized mass. Melting point: 43°C (pure product). Soluble in water. Toxic if swallowed, by skin contact or by vapour inhalation. Rapidly absorbed through the skin. |
| MFAG-No | : 153 |

- Air transport

| | |
|--|-----------------------------|
| Transport regulations (IATA) | : Subject to the provisions |
| PCA Excepted quantities (IATA) | : E4 |
| PCA Limited quantities (IATA) | : Y644 |
| PCA limited quantity max net quantity (IATA) | : 1kg |

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| | |
|---------------------------------|---------|
| PCA packing instructions (IATA) | : 669 |
| PCA max net quantity (IATA) | : 25kg |
| CAO packing instructions (IATA) | : 676 |
| CAO max net quantity (IATA) | : 100kg |
| Special provisions (IATA) | : A113 |
| ERG code (IATA) | : 6L |

- Inland waterway transport

| | |
|-----------------------------------|------------|
| Classification code (ADN) | : T2 |
| Special provisions (ADN) | : 279, 802 |
| Limited quantities (ADN) | : 500 g |
| Excepted quantities (ADN) | : E4 |
| Equipment required (ADN) | : PP, EP |
| Number of blue cones/lights (ADN) | : 2 |

- Rail transport

| | |
|---|--------------------|
| Transport regulations (RID) | : Subject |
| Classification code (RID) | : T2 |
| Special provisions (RID) | : 279 |
| Limited quantities (RID) | : 500g |
| Excepted quantities (RID) | : E4 |
| Packing instructions (RID) | : P002, IBC08 |
| Special packing provisions (RID) | : B4 |
| Mixed packing provisions (RID) | : MP10 |
| Portable tank and bulk container instructions (RID) | : T3 |
| Portable tank and bulk container special provisions (RID) | : TP33 |
| Tank codes for RID tanks (RID) | : SGAH |
| Special provisions for RID tanks (RID) | : TU15 |
| Transport category (RID) | : 2 |
| Special provisions for carriage – Packages (RID) | : W11 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW28, CW31 |
| Colis express (express parcels) (RID) | : CE9 |
| Hazard identification number (RID) | : 60 |

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Phenol is not on the REACH Candidate List

Phenol is not on the REACH Annex XIV List

VOC content : 100 %

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 170)

WGK remark : Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

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12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

Waterbevaarlijkheid : 7 - Toxic to aquatic organisms

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

| Full text of H- and EUH-statements: | |
|-------------------------------------|---|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 (Inhalation) | Acute toxicity (inhal.), Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Muta. 2 | Germ cell mutagenicity, Category 2 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| STOT RE 2 | Specific target organ toxicity — Repeated exposure, Category 2 |
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H331 | Toxic if inhaled |
| H341 | Suspected of causing genetic defects |
| H373 | May cause damage to organs through prolonged or repeated exposure |

SDS ISOLAB

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product