OWR GmbH
74834 Elztal-Rittersbach

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

1.1 Product identifier

GD 6

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

1.2.1 Relevant uses

Decontamination

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

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Homepage www.owrgroup.com
E-mail welcome@owrgroup.com

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Technical information welcome@owrgroup.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (english)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute Tox. 4: H302+H332 Harmful if swallowed or if inhaled.
Skin Corr. 1: H314 Causes severe skin burns and eye damage.
STOT SE 3: H335 May cause respiratory irritation.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word DANGER

Contains: 2-aminoethanol

2-aminoethanol potassium salt

Benzyl alcohol

Hazard statements

H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.
H302+H332 Harmful if swallowed or if inhaled.

Precautionary statements

P261 Avoid breathing mist/vapours/spray.
P264 Wash thoroughly after handling with plenty of water and soap.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.
P312 Call a POISON CENTER / doctor if you feel unwell.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
50 - 80	2-aminoethanol
	CAS: 141-43-5, EINECS/ELINCS: 205-483-3, EU-INDEX: 603-030-00-8, Reg-No.: 01-2119486455-28
	GHS/CLP: Acute Tox. 4: H302 H312 H332 - Skin Corr. 1B: H314 - STOT SE 3: H335 - Aquatic Chronic 3: H412
5 - < 10	Benzyl alcohol
	CAS: 100-51-6, EINECS/ELINCS: 202-859-9, EU-INDEX: 603-057-00-5, Reg-No.: 01-2119492630-38-XXXX
	GHS/CLP: Acute Tox. 4: H302 H332 - Eye Irrit. 2: H319
5 - < 10	2-aminoethanol potassium salt
	GHS/CLP: Skin Corr. 1B: H314

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Remove contaminated soaked clothing immediately and dispose of safely.

Inhalation Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact In case of contact with skin wash off immediately with soap and water.
In the event of symptoms seek medical treatment.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult a doctor immediately.

Ingestion Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Nausea, vomiting.
Headache

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used Full water jet

5.2 Special hazards arising from the substance or mixture

risk of formation of toxic pyrolysis products, carbon monoxide (CO), not combusted hydrocarbons

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment (protective gloves, safety glasses, protective clothing).
Ensure adequate ventilation.
Use breathing apparatus if exposed to vapours.
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide suitable vacuuming at the processing area.
Avoid contact with eyes and skin. Use personal protective equipment.

The product is combustible.
Ignitable mixtures can be formed in the empty container.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.

Do not store together with food and animal food/diet.
Do not store with oxidizing or self-igniting materials.

Keep in a cool place. Store in a dry place.
Protect from heat/overheating and from sun.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
2-aminoethanol
CAS: 141-43-5, EINECS/ELINCS: 205-483-3, EU-INDEX: 603-030-00-8, Reg-No.: 01-2119486455-28
Long-term exposure: 1 ppm, 2,5 mg/m³, Sk
Short-term exposure (15-minute): 3 ppm, 7,6 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
2-aminoethanol
CAS: 141-43-5, EINECS/ELINCS: 205-483-3, EU-INDEX: 603-030-00-8, Reg-No.: 01-2119486455-28
Eight hours: 1 ppm, 2,5 mg/m³, H
Short-term (15-minute): 3 ppm, 7,6 mg/m³

DNEL

Substance
2-aminoethanol, CAS: 141-43-5
Industrial, inhalative, Long-term - local effects: 3,3 mg/m³.
Industrial, dermal, Long-term - systemic effects: 1 mg/kg.
general population, oral, Long-term - systemic effects: 3,75 mg/kg.
general population, dermal, Long-term - systemic effects: 0,24 mg/kg.
general population, inhalative, Long-term - local effects: 2 mg/m³.
Benzyl alcohol, CAS: 100-51-6
Industrial, dermal, Long-term - systemic effects: 9,5 mg/kg bw/day.
Industrial, dermal, Acute - systemic effects: 47 mg/kg bw/day.
Industrial, inhalative, Long-term - systemic effects: 90 mg/m³.
Industrial, inhalative, Acute - systemic effects: 450 mg/m³.
general population, inhalative, Long-term - systemic effects: 19,1 mg/m³.
general population, inhalative, Acute - systemic effects: 95,5 mg/m³.
general population, dermal, Long-term - systemic effects: 5,7 mg/kg bw/day.
general population, dermal, Acute - systemic effects: 28,5 mg/kg bw/day.
general population, oral, Long-term - systemic effects: 5 mg/kg bw/day.
general population, oral, Acute - systemic effects: 25 mg/kg bw/day.

PNEC

Substance
2-aminoethanol, CAS: 141-43-5
sewage treatment plants (STP), 100 mg/l.
soil, 0,037 mg/kg soil dw.
sediment (seaater), 0,043 mg/kg sediment dw.
sediment (freshwater), 0,434 mg/kg sediment dw.
seawater, 0,009 mg/l.
freshwater, 0,085 mg/l.
Benzyl alcohol, CAS: 100-51-6
seawater, 0,1 mg/l.
freshwater, 1 mg/l.
sediment (seaater), 0,527 mg/kg wwt.

sediment (freshwater), 5,27 mg/kg wwt.
sewage treatment plants (STP), 39 mg/l.
soil, 0,456 mg/kg wwt.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. 0,7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Solvent-resistant protective clothing.
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Respiratory protection mask in the event of high concentrations. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	light yellow
Odor	amine-like
Odour threshold	
pH-value	not determined
pH-value [1%]	not determined
Boiling point [°C]	not determined
Flash point [°C]	90
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	0,25
Density [g/ml]	1,06
Bulk density [kg/m³]	not applicable
Solubility in water	partially soluble
Partition coefficient [n-octanol/water]	not determined
Viscosity	not determined
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature [°C]	not determined

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

In use, may form flammable/explosive vapour-air mixture.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, inhalative, 12,23 mg/L.
ATE-mix, dermal, > 2000 mg/kg.
ATE-mix, oral, 1732 mg/kg.

Substance
2-aminoethanol, CAS: 141-43-5
LD50, dermal, Rabbit: 1000 - 2500 mg/kg bw.
LD50, oral, Rat: 1050 - 1550 mg/kg bw.
LC50, inhalativ (vapour), Rat: > 1,48 mg/l (4 h).
Benzyl alcohol, CAS: 100-51-6
LD50, oral, Rat: 1620 mg/kg.

Serious eye damage/irritation
Risk of serious damage to eyes.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Skin corrosion/irritation
Product is caustic.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Respiratory or skin sensitisation
Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — single exposure
May cause respiratory irritation.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Specific target organ toxicity — repeated exposure
Based on the available information, the classification criteria are not fulfilled.

Mutagenicity
Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity
Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity
Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
2-aminoethanol, CAS: 141-43-5
LC50, (96h), Cyprinus carpio: 349 mg/l.
LC50, (96h), Carassius auratus: 170 mg/l.
EC50, (16h), Pseudomonas putida: 110 mg/l.
EC50, (72h), Scenedesmus subspicatus: 22 mg/l.
EC50, (72h), Selenastrum capricornutum: 2,5 mg/l (OECD 201).
EC50, (48h), Daphnia magna: 65 mg/l (IUCLID).
NOEC, Oryzias latipes: 1,2 mg/l (30 d).
NOEC, (21d), Daphnia magna: 0,85 mg/l (OECD 211).
Benzyl alcohol, CAS: 100-51-6
LC50, (96h), Pimephales promelas: 460 mg/l.
EC50, (48h), Daphnia magna: 230 mg/l (OECD 202).
IC50, (72h), Pseudokirchneriella subcapitata: 700 mg/l (OECD 201).

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Coordinate disposal with the disposal contractor/authorities if necessary.

Waste no. (recommended) 070704*

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110*
150102

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	1719
Inland navigation (ADN)	1719
Marine transport in accordance with IMDG	1719
Air transport in accordance with IATA	1719

14.2 UN proper shipping name

Transport by land according to ADR/RID	Caustic alkali liquid, n.o.s. (Ethanolamine, Potassium aminoethanolate)
- Classification Code	C5
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (E)
Inland navigation (ADN)	Caustic alkali liquid, n.o.s. (Ethanolamine, Potassium aminoethanolate)
- Classification Code	C5
- Label	
Marine transport in accordance with IMDG	Caustic alkali liquid, n.o.s. (Ethanolamine, Potassium aminoethanolate)
- EMS	F-A, S-B
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Caustic alkali liquid, n.o.s. (Ethanolamine, Potassium aminoethanolate-solution
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	8
Inland navigation (ADN)	8
Marine transport in accordance with IMDG	8
Air transport in accordance with IATA	8

14.4 Packing group

Transport by land according to ADR/RID	III
Inland navigation (ADN)	III
Marine transport in accordance with IMDG	III
Air transport in accordance with IATA	III

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

EEC-REGULATIONS	1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2017).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	80 %

15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H319 Causes serious eye irritation.
H302+H332 Harmful if swallowed or if inhaled.
H412 Harmful to aquatic life with long lasting effects.
H335 May cause respiratory irritation.
H314 Causes severe skin burns and eye damage.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Acute Tox. 4: H302+H332 Harmful if swallowed or if inhaled. ()
Skin Corr. 1: H314 Causes severe skin burns and eye damage. (Calculation method)
STOT SE 3: H335 May cause respiratory irritation. (Calculation method)
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

none