

Hi-Def Azure

Version number: GHS 3.0
Replaces version of: 2017-11-14 (3H5000 2)

Revision: 2018-10-22

SECTION 1: Identification

1.1 Product identifier

Name **Hi-Def Azure**
Product number 3H5000

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

Relevant identified uses General use

1.3 Details of the supplier of the safety data sheet

Teknova
2290 Bert Dr.
Hollister California 95023
United States

Telephone: 831-637-1100
Telefax: 831-637-2355
e-mail: info@teknova.com
Website: www.teknova.com

1.4 Emergency telephone number

CHEM TREC Emergency Phone Number (800)-424-9300

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
B.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word warning

- Pictograms

GHS05



- Hazard statements

H290 May be corrosive to metals.

- Precautionary statements

P234 Keep only in original container.
P390 Absorb spillage to prevent material damage.
P406 Store in corrosive resistant container with a resistant inner liner.

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2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Proprietary Information.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Substance or mixture corrosive to metals.

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Hazardous combustion products

Nitrogen oxides (NO_x)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

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Managing of associated risks

- Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Consideration of other advice

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	ammonium chloride	12125-02-9	PEL (CA)		10		20			fume	Cal/ OSHA PEL
US	ammonium chloride	12125-02-9	REL		10 (10 h)		20			fume	NIOSH REL
US	ammonium chloride	12125-02-9	TLV®		10		20			fume	AC-GIH® 2018
US	potassium hydroxide	1310-58-3	REL						2		NIOSH REL
US	potassium hydroxide	1310-58-3	TLV®						2		AC-GIH® 2018
US	potassium hydroxide (caustic potash)	1310-58-3	PEL (CA)						2		Cal/ OSHA PEL

Notation

Ceiling-C

fume

STEL

TWA

ceiling value is a limit value above which exposure should not occur

as fume

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Sodium Chloride	7647-14-5	DNEL	2,069 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

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Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Sodium Chloride	7647-14-5	DNEL	2,069 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Sodium Chloride	7647-14-5	DNEL	295.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Sodium Chloride	7647-14-5	DNEL	295.5 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
Potassium Hydroxide	1310-58-3	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
L-Serine	56-45-1	DNEL	529 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Serine	56-45-1	DNEL	750 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Ammonium Chloride	12125-02-9	DNEL	33.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Ammonium Chloride	12125-02-9	DNEL	190 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Leucine (Leu)	61-90-5	DNEL	293.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Leucine (Leu)	61-90-5	DNEL	833 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Glutamine	56-85-9	DNEL	138.6 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Glutamine	56-85-9	DNEL	196.6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Alanine	56-41-7	DNEL	226.2 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Alanine	56-41-7	DNEL	320.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Valine	72-18-4	DNEL	110.7 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Valine	72-18-4	DNEL	157 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Asparagine Anhydrous	70-47-3	DNEL	81.4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Asparagine Anhydrous	70-47-3	DNEL	80.61 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-isoleucine	73-32-5	DNEL	52.89 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-isoleucine	73-32-5	DNEL	150 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Potassium Sulfate	7778-80-5	DNEL	37.6 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

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Potassium Sulfate	7778-80-5	DNEL	21.3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Threonine (Thr)	72-19-5	DNEL	158 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Threonine (Thr)	72-19-5	DNEL	225 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Proline	147-85-3	DNEL	488.9 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Proline	147-85-3	DNEL	693.3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Methionine (met)	63-68-3	DNEL	110.4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Methionine (met)	63-68-3	DNEL	156.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-Tryptophan	73-22-3	DNEL	664 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
L-Tryptophan	73-22-3	DNEL	941 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Ferrous (Iron II) Sulfate Heptahydrate	7782-63-0 7720-78-7 13463-43-9	DNEL	2.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
4-Hydroxybenzoic Acid	99-96-7	DNEL	2.4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
4-Hydroxybenzoic Acid	99-96-7	DNEL	2.4 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
4-Hydroxybenzoic Acid	99-96-7	DNEL	4.8 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
4-Hydroxybenzoic Acid	99-96-7	DNEL	4.8 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
4-Hydroxybenzoic Acid	99-96-7	DNEL	14.1 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	DNEL	10.58 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	DNEL	12 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Calcium Chloride Dihydrate	10035-04-8 7774-34-7 10043-52-4	DNEL	5 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Calcium Chloride Dihydrate	10035-04-8 7774-34-7 10043-52-4	DNEL	10 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

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Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Sodium Chloride	7647-14-5	PNEC	5 mg/l	aquatic organisms	freshwater	short-term (single instance)
Sodium Chloride	7647-14-5	PNEC	500 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Sodium Chloride	7647-14-5	PNEC	4.86 mg/kg	terrestrial organisms	soil	short-term (single instance)
L-Arginine Monohydrochloride	1119-34-2	PNEC	2.2 mg/l	aquatic organisms	freshwater	short-term (single instance)
L-Arginine Monohydrochloride	1119-34-2	PNEC	0.22 mg/l	aquatic organisms	marine water	short-term (single instance)
L-Arginine Monohydrochloride	1119-34-2	PNEC	12 g/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Arginine Monohydrochloride	1119-34-2	PNEC	4.437 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
L-Arginine Monohydrochloride	1119-34-2	PNEC	0.444 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
L-Serine	56-45-1	PNEC	50 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Ammonium Chloride	12125-02-9	PNEC	1.2 mg/l	aquatic organisms	freshwater	short-term (single instance)
Ammonium Chloride	12125-02-9	PNEC	11.2 mg/l	aquatic organisms	marine water	short-term (single instance)
Ammonium Chloride	12125-02-9	PNEC	16.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Ammonium Chloride	12125-02-9	PNEC	0.163 mg/kg	terrestrial organisms	soil	short-term (single instance)
Magnesium Chloride, Hexahydrate	7791-18-6 7786-30-3	PNEC	3.21 mg/l	aquatic organisms	freshwater	short-term (single instance)
Magnesium Chloride, Hexahydrate	7791-18-6 7786-30-3	PNEC	0.32 mg/l	aquatic organisms	marine water	short-term (single instance)
Magnesium Chloride, Hexahydrate	7791-18-6 7786-30-3	PNEC	90 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Magnesium Chloride, Hexahydrate	7791-18-6 7786-30-3	PNEC	288.9 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Magnesium Chloride, Hexahydrate	7791-18-6 7786-30-3	PNEC	28.89 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Magnesium Chloride, Hexahydrate	7791-18-6 7786-30-3	PNEC	662.8 mg/kg	terrestrial organisms	soil	short-term (single instance)
L-Leucine (Leu)	61-90-5	PNEC	10 mg/l	aquatic organisms	freshwater	short-term (single instance)
L-Leucine (Leu)	61-90-5	PNEC	1 mg/l	aquatic organisms	marine water	short-term (single instance)

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Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
L-Leucine (Leu)	61-90-5	PNEC	10 ^g / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Leucine (Leu)	61-90-5	PNEC	20.39 ^{mg} / _{kg}	aquatic organisms	freshwater sediment	short-term (single instance)
L-Leucine (Leu)	61-90-5	PNEC	2.039 ^{mg} / _{kg}	aquatic organisms	marine sediment	short-term (single instance)
L-Glutamine	56-85-9	PNEC	0.95 ^{mg} / _l	aquatic organisms	freshwater	short-term (single instance)
L-Glutamine	56-85-9	PNEC	0.095 ^{mg} / _l	aquatic organisms	marine water	short-term (single instance)
L-Alanine	56-41-7	PNEC	50 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Valine	72-18-4	PNEC	10 ^{mg} / _l	aquatic organisms	freshwater	short-term (single instance)
L-Valine	72-18-4	PNEC	1 ^{mg} / _l	aquatic organisms	marine water	short-term (single instance)
L-Valine	72-18-4	PNEC	10 ^g / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Valine	72-18-4	PNEC	20.39 ^{mg} / _{kg}	aquatic organisms	freshwater sediment	short-term (single instance)
L-Valine	72-18-4	PNEC	2.039 ^{mg} / _{kg}	aquatic organisms	marine sediment	short-term (single instance)
L-Asparagine Anhydrous	70-47-3	PNEC	50 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Potassium Sulfate	7778-80-5	PNEC	0.68 ^{mg} / _l	aquatic organisms	freshwater	short-term (single instance)
Potassium Sulfate	7778-80-5	PNEC	0.068 ^{mg} / _l	aquatic organisms	marine water	short-term (single instance)
Potassium Sulfate	7778-80-5	PNEC	10 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Proline	147-85-3	PNEC	50 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Methionine (met)	63-68-3	PNEC	0.162 ^{mg} / _l	aquatic organisms	freshwater	short-term (single instance)
L-Methionine (met)	63-68-3	PNEC	0.016 ^{mg} / _l	aquatic organisms	marine water	short-term (single instance)
L-Methionine (met)	63-68-3	PNEC	1,000 ^{mg} / _l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
L-Methionine (met)	63-68-3	PNEC	0.585 ^{mg} / _{kg}	aquatic organisms	freshwater sediment	short-term (single instance)
L-Methionine (met)	63-68-3	PNEC	0.059 ^{mg} / _{kg}	aquatic organisms	marine sediment	short-term (single instance)

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Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
L-Methionine (met)	63-68-3	PNEC	0.022 mg/kg	terrestrial organisms	soil	short-term (single instance)
L-Tryptophan	73-22-3	PNEC	2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
4-Hydroxybenzoic Acid	99-96-7	PNEC	2 mg/l	aquatic organisms	freshwater	short-term (single instance)
4-Hydroxybenzoic Acid	99-96-7	PNEC	1.1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	PNEC	0.034 mg/l	aquatic organisms	freshwater	short-term (single instance)
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	PNEC	0.003 mg/l	aquatic organisms	marine water	short-term (single instance)
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	PNEC	48.7 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	PNEC	0.115 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	PNEC	0.011 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	PNEC	10 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Type of material

Nitrile

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- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	no data available
Odor	no data available

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	354.6 °C
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	0 Pa at 25 °C
Density	not determined
Vapor density	not determined
Relative density	information on this property is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	>400 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
9.2 Other information	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". Substance or mixture corrosive to metals.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

The classification criteria for these hazard classes are not met.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Potassium Hydroxide	1310-58-3	oral	333 mg/kg
L-Serine	56-45-1	oral	2,000 mg/kg

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Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Ammonium Chloride	12125-02-9	oral	1,410 mg/kg
L-Histidine Hydrochloride Monohydrate	5934-29-2	oral	316 mg/kg
Calcium D-pantothenate	137-08-6	oral	820 mg/kg
Ferrous (Iron II) Sulfate Heptahydrate	7782-63-0 7720-78-7 13463-43-9	oral	500 mg/kg

Skin corrosion/irritation

The classification criteria for this hazard class are not met. Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

The classification criteria for this hazard class are not met. Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

The classification criteria for these hazard classes are not met.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

The classification criteria for this hazard class are not met.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
p-Aminobenzoic Acid (Para Aminobenzoic Acid - PABA)	150-13-0	3	Volume 16, Sup 7

Legend

3 Not classifiable as to carcinogenicity in humans

Specific target organ toxicity - single exposure

The classification criteria for this hazard class are not met. Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

The classification criteria for this hazard class are not met.

Aspiration hazard

The classification criteria for this hazard class are not met.

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SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number	1760
14.2 UN proper shipping name	Corrosive liquid, n.o.s.
14.3 Transport hazard class(es)	
Class	8 (corrosive substances)
14.4 Packing group	III (substance presenting low danger)
14.5 Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
The cargo is not intended to be carried in bulk.	

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Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	1760
Proper shipping name	Corrosive liquid, n.o.s.
- Particulars in the shipper's declaration	UN1760, Corrosive liquid, n.o.s., 8, III
- Reportable quantity (RQ)	451,535 lbs (204,997 kg) (Potassium Hydroxide)
Class	8
Packing group	III
Danger label(s)	8



Special provisions (SP)	IB3, T7, TP1, TP28
ERG No	154

International Maritime Dangerous Goods Code (IMDG)

UN number	1760
Proper shipping name	CORROSIVE LIQUID, N.O.S.
Class	8
Marine pollutant	-
Packing group	III
Danger label(s)	8



Special provisions (SP)	223, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	1760
Proper shipping name	Corrosive liquid, n.o.s.
Class	8
Packing group	III
Danger label(s)	8



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Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Ammonium Chloride	12125-02-9		1	5000 (2270)
Ferrous (Iron II) Sulfate Heptahydrate	7720-78-7		1	1000 (454)
Ferrous (Iron II) Sulfate Heptahydrate	7782-63-0		1	1000 (454)
Potassium Hydroxide	1310-58-3		1	1000 (454)

Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

Clean Air Act

none of the ingredients are listed

New Jersey Worker and Community Right to Know Act

Right to Know Hazardous Substance List			
Name acc. to inventory	CAS No	Remarks	Classifications
ammonium chloride	12125-02-9		
FERROUS SULFATE (SULFURIC ACID, IRON(2+) SALT (1:1))	7720-78-7		
potassium hydroxide	1310-58-3		CO R1

Legend

CO Corrosive
R1 Reactive - First Degree

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California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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Disclaimer

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculation are based on information furnished by the manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in section 1. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Teknova, inc. Shall not be held liable for any damage resulting from handling or from contact with the above product.

Teknova, inc.