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(Contd. of page 1) Keep out of reach of children. Read label before use. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see on this label). Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. • Classification system: • NFPA ratings (scale 0 - 4)

 $\begin{array}{c} \textbf{Health} = 1\\ \textbf{Fire} = 0\\ \textbf{Reactivity} = 0 \end{array}$

· HMIS-ratings (scale 0 - 4)

HEALTH 1	Health = 1
FIRE 0	Fire = 0
REACTIVITY 0	Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

• Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous	components:		
7664-93-9	sulphuric acid	10-25%	
21351-39-3	Urea Sulfate	2.5-10%	

4 First-aid measures

- · Description of first aid measures
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available. • Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

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5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities Corrosive to Alunimum
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility:
- Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

7664-93-9 sulphuric acid (10-25%)

PEL Long-term value: 1 mg/m³

REL Long-term value: 1 mg/m³

TLV Long-term value: 0.2* mg/m³

*as thoracic fraction

• Additional information: The lists that were valid during the creation were used as basis.

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- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
- Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

• Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

Information on basic physical and General Information	chemical properties	
· Appearance:		
Form:	Fluid	
Color:	According to product specification	
Odor:	Characteristic	
Odour threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	100 °C (212 °F)	
Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Not applicable.	

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Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)	
Density at 20 °C (68 °F):	1.12 g/cm ³ (9.346 lbs/gal)	
Relative density	Not determined.	
Vapour density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
Partition coefficient (n-octanol/wate	e r): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Organic solvents:	0.0 %	
Water:	78.8 %	
VOC content:	9.4 %	
Solids content:	11.8 %	
• Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions Avoid metal powder
- · Conditions to avoid No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

7664-93-9 sulphuric acid

· NTP (National Toxicology Program)

7664-93-9 sulphuric acid

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

UN-Number	
DOT, IMDG, IATA	UN3264
UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid)
IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S
<i>,</i>	(SULPHURIC ACID)

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· Transport hazard class(es)	
·DOT	
CORROSIVE 3	
· Class	8 Corrosive substances
· Label	8
· IMDG, IATA	
· Class · Label	8 Corrosive substances 8
· Packing group	
· DOT, IMDG, IATA	II
· Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	F-A,S-B
Segregation groups	Acids
Transport in bulk according to Annex	
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 1 L
	On cargo aircraft only: 30 L

15 Regulatory information

 \cdot Limited quantities (LQ)

 \cdot Excepted quantities (EQ)

· UN ''Model Regulation'':

· IMDG

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· Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara

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lL

Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid),

· Section 355 (extremely hazardous substances):

7664-93-9 sulphuric acid

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	ic toxic chemical listings):
7664-93-9 sulphuri	
TSCA (Toxic Substa	
7664-93-9 sulphuri	
*	istilled, conductivity or of similar purity
Proposition 65	
Chemicals known to) cause cancer:
None of the ingredie	
	cause reproductive toxicity for females:
None of the ingredie	
None of the ingredie	o cause reproductive toxicity for males:
	o cause developmental toxicity:
None of the ingredie	ents is listed.
Carcinogenic catego	ories
EPA (Environmento	al Protection Agency)
None of the ingredie	nts is listed.
TLV (Threshold Lin	nit Value established by ACGIH)
7664-93-9 sulphuri	c acid
NIOSH-Ca (Nation	al Institute for Occupational Safety and Health)
GHS label elements	nts is listed. The product is classified and labeled according to the Globally Harmonized System (GF
GHS label elements Hazard pictograms	
GHS label elements Hazard pictograms	The product is classified and labeled according to the Globally Harmonized System (GF
GHS label elements Hazard pictograms GHS05 GHS08 Signal word Danger	The product is classified and labeled according to the Globally Harmonized System (GF
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GHS label elements Hazard pictograms GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements	The product is classified and labeled according to the Globally Harmonized System (GF , , g components of labeling:
GHS label elements Hazard pictograms GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements Causes skin irritatio	The product is classified and labeled according to the Globally Harmonized System (GF , , g components of labeling: n.
GHS label elements Hazard pictograms GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements Causes skin irritatio Causes serious eye d	The product is classified and labeled according to the Globally Harmonized System (GF , , g components of labeling: n.
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GHS label elements Hazard pictograms GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements Causes skin irritatio Causes serious eye a May cause cancer. Precautionary stater If medical advice is a Keep out of reach of Read label before us Wear protective glow	The product is classified and labeled according to the Globally Harmonized System (GE , , , g components of labeling: n. lamage. ments needed, have product container or label at hand. f children. se. ves/protective clothing/eye protection/face protection.
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Hazard pictograms Hazard pictograms GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements Causes skin irritatio Causes serious eye a May cause cancer. Precautionary staten If medical advice is a Keep out of reach of Read label before us Wear protective glow Use personal protec IF IN EYES: Rinse of Continue rinsing.	The product is classified and labeled according to the Globally Harmonized System (GF , , g components of labeling: n. lamage. ments needed, have product container or label at hand. f children. f children. se. ves/protective clothing/eye protection/face protection. tive equipment as required. cautiously with water for several minutes. Remove contact lenses, if present and easy to
GHS label elements Hazard pictograms GHS05 GHS08 GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements Causes skin irritatio Causes serious eye a May cause cancer. Precautionary staten If medical advice is a Keep out of reach of Read label before us Wear protective glow Use personal protec IF IN EYES: Rinse of Continue rinsing. Specific treatment (s	The product is classified and labeled according to the Globally Harmonized System (GF , , g components of labeling: n. lamage. ments needed, have product container or label at hand. f children. f children. se. ves/protective clothing/eye protection/face protection. tive equipment as required. cautiously with water for several minutes. Remove contact lenses, if present and easy to
GHS label elements Hazard pictograms GHS05 GHS08 GHS05 GHS08 Signal word Danger Hazard-determining sulphuric acid Hazard statements Causes skin irritatio Causes serious eye a May cause cancer. Precautionary staten If medical advice is is Keep out of reach of Read label before us Wear protective glow Use personal protec IF IN EYES: Rinse of Continue rinsing. Specific treatment (s Store locked up.	The product is classified and labeled according to the Globally Harmonized System (GF , , g components of labeling: n. lamage. ments needed, have product container or label at hand. f children. f children. se. ves/protective clothing/eye protection/face protection. tive equipment as required. cautiously with water for several minutes. Remove contact lenses, if present and easy to

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· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16 Other information This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. · Department issuing MSDS: Regulatory Group · Contact: Mr. Schroeder · Date of preparation / last revision 07/23/2014 / -· Abbreviations and acronvms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1 Carc. 1A: Carcinogenicity, Hazard Category 1A USA