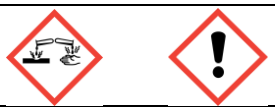
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1	**Product identifier**		
	Trade name:	Sulphuric acid OLEUM with 25 - 32% of SO_3	
	International chemical name / CAS Number	Sulphuric trioxide, solution of sulphuric acid/ 8014-95-7	
	Identification number:	016-019-00-2	
	Registration number:	01-2119458835-26-0019 (SO_3), 01-2119458838-20-0022 (H_2SO_4)	
1.2	**Relevant identified uses of the substance or mixture and uses advised against**		
	Identified uses	**Uses by workers in industrial settings**	
	1	Production of sulphur trioxide	
	2	Use of sulphur trioxide as an intermediate	
	3	Use of oleum as a nitration agent	
	4	Formulation of oleum	
		Uses by professional workers	
		Uses by users	
	Uses advised against:	Oleum is always added to water, not vice versa, slowly and while stirring continuously.	
1.3	**Details of the supplier of the safety data sheet**		
	Manufacturer:	SPOLANA a.s.	
	Registered office:	SPOLANA a.s., ul. Práce 657, 277 11 Neratovice	
	Company ID:	451 47 787	
	Telephone:	Tel: +420 315 662 555	Fax: +420 315 666 633
	Competent person responsible:	Tel: +420 315 662 555	Mail: reach@spolana.cz
1.4	**Emergency telephone number** Klinika pracovního lékařství VFN a 1. LF UK Toxikologické informační středisko Na Bojišti 1, 120 00, Praha 2 Tel: +420 224 919 293, +420 224 915 402 E-mail:tis@vfn.cz Information only for health risks - acute poisoning of humans and animals		

SECTION 2: Hazards identification

	Classification of the substance:	Substance is classified as corrosive and irritating to skin (Hazard Category 1A) and with specific target organ toxicity to respiratory tract after single exposure (Hazard Category 3, Respiratory tract irritation)	
	Dangerous health effects:	Fumes are irritating and corrosive to eyes, respiratory system and skin. Harmful by swallowing; chemical burns of the respiratory tract, skin, eyes, and mucosa.	
	Dangerous environmental effects.	Strong corrosive. Harmful to water.	
2.1	**Classification of the substance or mixture**		
	Classification according to (EC) 1272/2008:	Codes for hazard classes and categories	Skin Corr. 1A STOT Single Exp. 3
		Hazard Codes phrase	H314, H335, EUH014

2.2	**Label elements**	
	Hazard pictogram(s):	
	Signal word:	Danger
	Hazard statement(s):	H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. EUH014 Reacts violently with water
	Precautionary statement(s):	P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
2.3	**Other hazards** Avoid product misuse! It may react violently with water (watch out for the production of heat). It may ignite flammable substances. It may enter into reaction with air, heat or light. When mixing it with water, make sure the temperature of the solution does not grow excessively. Oleum is always added to water, not vice versa, slowly and while stirring continuously.	

SECTION 3: Composition/information on ingredients

3.1	**Substances**				
		Name.	The term oleum means solution of sulphuric trioxide (SO_3) in sulphuric acid – the manufactured oleum contains 25-32 % of free SO_3 (105.6 - 107.2 % of vol. H_2SO_4).		
		Identification number:	Index number	CAS number	EC number
			016-019-00-2	8014-95-7	---
	The major component identifier:	Name.	Sulphuric acid, **Skin Corr. 1A; H314; C ≥ 15 %; note B**		
		Identification number:	Index number	CAS number	EC number
			016-020-00-8	7664-93-9	231-639-5
	The chemical identity of impurities conducive to at classification	Name.			
		Identification number:	Index number	CAS number	EC number

SECTION 4: First aid measures

4.1 Description of first aid measures

General first aid principles:

In life threatening situations the administration of resuscitation is a priority
The victim does not breathe- administer artificial respiration immediately
Heart arrest - administer cardiac massage immediately
Unconsciousness - put the victim in a stabilized position on his/her side

	Inhalation:	If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Move exposed person to fresh air. Get medical attention immediately. Depending on a specific situation, rinse the mouth or nose with water. Take off the clothes if they are contaminated. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Skin contact:	Remove contaminated clothing and shoes. Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Cover affected (burnt) skin areas with a sterile bandage. Get medical attention immediately. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Eye contact:	Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open with your fingers (even forcibly), remove contact lens, if any and if you can remove it easily. Seek immediate medical attention. Even minor contaminations of employees must be referred to a doctor.
	Ingestion:	Do not induce vomiting!!! This could pose risk of alimentary tract perforation! Rinse mouth immediately and then drink plenty of water. Have the victim drink 2-5 dl of as cold as possible water (ice cold) immediately to alleviate the thermal effects of the caustic agent. Because its effects on the mucosa are nearly instantaneous, even tap water can be used for the sake of expeditiousness. Do not force him/her to drink anything. Do not let the victim eat. Do not administer medicinal charcoal. Get medical attention immediately.
4.2	**Most important symptoms and effects, both acute and delayed**	
	Inhalation:	Respiratory tract irritation.
	Skin contact:	chemical burns of the skin
	Eye contact:	chemical burns of the eyes
	Ingestion:	harmful by swallowing, chemical burns of the respiratory tract and mucosa
4.3	**Indication of any immediate medical attention and special treatment needed** In case of any health problems or when in doubt seek medical aid.	

SECTION 5: Firefighting measures		
5.1	**Extinguishing media**	
	Suitable extinguishing media	Small amounts: use water spray (fog), foam, dry chemical or CO2 Large volumes: Use heavy and medium foam; apply water mist from safe distance. Fire fighting: Remove the material from the fire area, providing it can be done safely. Use only suitable extinguishing means. Stand on the windward side of the fire and out of low-situated places. Cool the containers with water mist until the fire is extinguished. Use water spray to absorb leaking corrosive vapors.
	Unsuitable extinguishing media:	The container must not be penetrated with water. Prevent a full stream of water from contact with the spilt material.
5.2	**Special hazards arising from the substance or mixture**	

	In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Do not inhale combustion products. Thermal decomposition may produce toxic products (for instance, sulphur oxides). Sulphuric acid is inflammable. It presents a marginal risk of fire if the product is exposed to heat or flames. It decomposes oxidation agents, especially if they are heated, producing oxygen or other gases accelerating the combustion of flammable materials. Contact with easy to, organic or other flammable substances can lead to ignition, vigorous combustion or explosion.
5.3	**Advice for firefighters** Decomposition products may include the following materials: sulphur oxides Fire-fighters should wear appropriate protective equipment and selfcontained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures	
6.1	**Personal precautions, protective equipment and emergency procedures** Personal precautions: Keep unauthorized people outside the affected area. Isolate the hazardous area and prohibit entry. Ventilate the affected area before entering it. Inform a local emergency center. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment (see section 8). Prevent direct contact with oleum. Do not touch the material leaking out of packaging units. Separate flammable materials (wood, paper, oil, etc.) from the spilt substance.
6.2	**Environmental precautions** Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers if it can be done without taking any personal risks. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air) Clean the contaminated area as soon as possible. Soil contamination: Dig out capture areas such as lagoons or ponds to contain the leaking material. Cover them with plastic tarpaulins to minimize the spread of the leaking pollutant. Prevent contact with water.
6.3	**Methods and material for containment and cleaning up** LARGE SPILL: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. SMALL SPILL: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material (in sand or other incombustible materials) and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor (for further neutralization that can be achieved by using hydrated lime, ground limestone)
6.4	**Reference to other sections** Note: see section 1 for emergency contact information and section 13 for waste disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

When handling and storing the product keep valid safety regulations regarding work with caustic agents.
Put on appropriate personal protective equipment. Do not get in eyes or on skin or clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from water and alkalis. Empty containers retain product residue and can be hazardous.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.
Store in original sealed acid-resistant container in a dry, cool and well ventilated area,
protected from direct sunlight or frost (lower temperatures presents the risk of Oleum freezing (solidification temperature of 25 % oleum = -4.35 °C, solidification temperature of 30 % oleum = -17.1 °C)
Keep away from incompatible materials (carbides, chlorates, nitrates, picrates, and metal powder) and food and drink, alkalis, water and combustible materials.
Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
Remarks: Ensure effective ventilation. Vent waste air only via suitable separators or scrubbers. Make sure all pipelines, tanks and equipment are leakproof.

7.3 Specific end use(s)

Oleum is mainly used as a sulphonatic agent. Oleum is supplied in railroad cisterns, car cisterns and glass packaging units. Before filling, packaging must be cleaned of all impurities and dried properly. The transport of caustic materials is subject to special regulation.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The national occupational exposure limit values according to Government decree No. 361/2007 Sb.

Name of substance (component(s)):	CAS	8-hours limit PEL [mg/m^3]	Short-term limit NPK-P [mg/m^3]	Note
H_2SO_4 (like fog)	7664-93-9	0.05		
H_2SO_4 (like SO_3)	7664-93-9	1	2	
SO_3	7446-11-9	1	2	
SO_2	7446-09-5	1.5	5	

PEL- admissible exposure limit of the chemical substance in the working environment
NPK-P- maximum admissible exposure limit of the chemical substance in the working environment

Occupational exposure limit values according to Directives 39/2000/EC and 15/2006/EC

Name of substance (component(s)):	CAS	8-hours limit TWA[mg/m^3]	Short-term limit STEL[mg/m^3]	Note
		Not determined	Not determined	

8-hour limit - measured or calculated limit related to an 8-hour reference period as a time-weighed average
Short-term limit – limit value corresponding to 15 minutes; if exceeded exposure should be avoided

Recommended monitoring procedures:
Use detection equipment – multi-detectors of gases (SO_2, SO_3), detection tubes, laboratory analytical scale (e.g. NIOSH 7903 defines the determination of the aerosol of sulphuric acid in the working environment by taking a sample on a tube and processing it by means of ion chromatography).

The national biological limit values: not determined

DNEL	for Sulphur trioxide	for Sulphuric acid
Worker, Long-term exposure - local effects, Inhalation:	0.05 mg/m³	0.05 mg/m³
Worker, Acute - local effects, Inhalation	0.1 mg/m³	0.1 mg/m³
PNEC		
PNEC aqua (freshwater):	0.0025 mg/l	0.0025 mg/l
PNEC aqua (marine water):	0.00025 mg/l	0.00025 mg/l
PNEC aqua (intermittent releases):	Not relevant	Not relevant
PNEC sediment (freshwater):	0.002 mg/kg wwt	0.002 mg/kg wwt

PNEC sediment (marine water):	0.0002 mg/kg wwt	0.0002 mg/kg wwt
PNEC soil:	Not relevant	Not relevant
PNEC STP:	8.8 mg/l	8.8 mg/l
PNEC oral (mg/kg food)	Not relevant	Not relevant

8.2 Exposure controls

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Whenever the affection of the employees appears to be likely, the working area must be equipped with a water fountain to rinse the eyes and with a safety shower (with at least a minimum appropriate water flow) in the event that first aid has to be administered.

Minimize the production of aerosols during handling. Take appropriate technical measures to make sure that the maximum admissible concentration (NPK-P) in the working environment is not exceeded.

Employees must be provided with means of personal protection (working clothes resistant to acids, face shield or goggles, rubber apron, rubber gloves, rubber boots).
Where the NPK-P standard cannot be met, the respiratory tract must also be protected for instance by wearing a protective mask with an appropriate filter eliminating acidic vapors and aerosols. All the means of personal protection must always be kept in a fit-to-use condition; if damaged, they must be replaced.
In addition, direct contact with acid must be prevented. When working in laboratory conditions, observe the requirements of ČSN 01 8003, above all use so-called safety pipettes for pipeting. Also, observe alkali handling regulations.

Personal protective equipment:

Respiratory protection:	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Full mask with type ABEK filter or self-contained breathing apparatus (SCBA)
Eye protection:	Employees are obliged to wear safety eyewear complying with an approved standard when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Hand protection:	Protective gloves with these specifications:

Working activity	Glove material	Minimum layer thickness	Time of penetration (minutes)
Common working activities with the possible risk of contamination	Natural latex (KCL-706) Natural latex (KCL-403) Nitril (KCL-732)	0.6 mm 1.0 mm 0.4 mm	> 10 min > 30 min > 30 min
Use during the liquidation of leaks and during accidents	Viton (KCL-890)	0.7 mm	> 480 min

Note: The gloves used must comply with the requirements of EU 89/686/EEC and standard EN 374.
The table presents the laboratory-detected data of the company KCL (catalog values). The values apply to the above-specified types of protective gloves. When different, equivalent types of glove are used, the same data have to be obtained from their supplier.

Skin protection:	Employees are obliged to wear appropriate protective clothes to prevent contact with the product. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: chemical-resistant protective suit

Environmental exposure control:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Do not discharge into the sewer system, surface water and soil.

SECTION 9: Physical and chemical properties		
9.1	**Information on basic physical and chemical properties**	
	Appearance	Oleum is an oily liquid, more or less discolored or turbid by impurities
	Odour:	odourless
	Odour threshold:	No data available.
	pH (at 20°C):	Not applicable (varies with the acid strength)
	Melting point/freezing point (°C):	solidification temperature of 25 % oleum = -4.35 °C, solidification temperature of 30 % oleum = -17.1 °C 16.8 °C for Sulphur trioxide -13.89 to -10°C (96% sulphuric acid)
	Initial boiling point and boiling range (°C):	330°C for Sulphuric acid 96% (boiling point increases as the acid strength increases to a maximum at around 97-98%)
	Flash point (°C):	Not applicable
	Evaporation rate:	Not applicable
	Flammability (solid, gas):	Non-flammable
	Upper/lower flammability: or explosive limits upper (% vol.):	
	lower (% vol.):	
	Vapour pressure:	345-552 Pa at 20 °C for 25-32 %SO_3
	Vapour density:	Not applicable
	Liquid density:	1,9139-1,9370 g/cm^3 at 20 °C for 25-32 %SO_3
	Solubility:	Soluble in water (in contact with water it becomes diluted while producing substantial heat)
	Partition coefficient n-octanol/water:	Not applicable
	Auto-ignition temperature:	Not applicable
	Decomposition temperature:	340 °C
	Gas viscosity:	38,0 – 39,3 mPa.s at 20 °C for 25-32 %SO_3
	Explosive properties:	Not expected to possess explosive properties (but it may ignite flammable substances or it may cause their explosion).
	Oxidising properties:	Sulphuric acid does not meet the criteria for classification as an oxidiser but has oxidation properties (concentrated acid) Sulphur trioxide does not behave like an oxidiser and should not be classified as such.
	Stability in organic solvents and identity of relevant degradation products	Not considered critical for an inorganic acid.
	Dissociation constant	No data are available: the substance degrades in water.
9.2	**Other information**	

SECTION 10: Stability and reactivity	
10.1	**Reactivity** Highly reactive with water and alkalis.
10.2	**Chemical stability** The product is stable.
10.3	**Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions will not occur.
10.4	**Conditions to avoid** Highly reactive with water and alkalis.

10.5	**Incompatible materials** Highly reactive with water and alkalis. Product will fume in contact with humid air. Keep away from the substances with which it enters into dangerous chemical reaction. It may make flammable materials (paper, oil, etc.) ignite. Flammable toxic gases may become accumulated in cramped areas. Leaks into sewerage may create a risk of fire or explosion (dangerous products of decomposition). Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Make sure the substance is sepatated from carbides, chlorates, nitrates, picrates, and metal powders Dangerous chemical reaction: Alkalis: violent reaction Chlorates: all chlorates – when in contact with oleum – may release explosive chlorine dioxide; violent reaction is common Chlorates and metals: possible ignition Flammable materials (finely separated): possible ignition Copper: development of sulphur dioxide Metals: attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Metal (powders): extremely dangerous mixture
10.6	**Hazardous decomposition products** Thermal decomposition produces oxides of sulphur.

SECTION 11: Toxicological information		
11.1	**Information on toxicological effects**	
	a)	***Acute toxicity*** LD50 Oral = 2140 mg/kg bw; LC50 Inhal = 375 mg/m3 air (based on assestment for sulphur trioxide and sulphuric acid)
	b)	***Skin corrosion/irritation*** Oleum is listed on Annex VI List of harmonised classification and labelling of hazardous substances according to Regulation (EC) No 1272/2008 with classification as Skin Corr. 1A, STOT Single Exp. 3, H314 and H335 (plus EUH014)
	c)	***Serious eye damage/irritation*** Sulphuric acid: conclusive but not sufficient for classification. SO_3: data lacking
	d)	***Respiratory or skin sensitisation*** Extensive occupational exposure to sulphur trioxide and sulphuric acid over many years has not resulted in any reports of skin sensitisation (delayed contact hypersensitivity) in exposed workers.
	e)	***Germ cell mutagenicity*** Sulphur trioxide and Sulphuric acid:: no classification is proposed for genotoxicity. Absence of systemic exposure to the substance and the lack of genotoxicity of the hydrogen and sulphate ions means that no genotoxicity is predicted and further testing is not required
	f)	***Carcinogenicity*** A number of studies (using various animal species) have not demonstrated any carcinogenic effect of inhalation exposure to sulphuric acid mists. Sulphur trioxide CSA: The available animal data do not support the classification of sulphuric acid, and therefore sulphur trioxide by extrapolation, for carcinogenicity.
	g)	***Reproductive toxicity*** Sulphur trioxide and Sulphuric acid:No classification is proposed for reproductive or developmental toxicity. The existing data and the absence of systemic exposure do not indicate that classification is required.
	h)	***Specific target organ toxicity (STOT)– single exposure*** Oleum is listed on Annex VI List of harmonised classification and labelling of hazardous according to Regulation (EC) No 1272/2008substances with classification as Skin Corr. 1A, STOT Single Exp. 3, H314 and H335 (plus EUH014)
	i)	***Specific target organ toxicity (STOT)– repeated exposure*** Sulphur trioxide and Sulphuric acid: classification for severe effects after repeated or prolonged exposure is not proposed. While the studies performed with sulphuric acid clearly show the potential for toxicity following repeated/prolonged exposure to low concentrations, there is clearly no potential for systemic toxicity and the effects seen in these studies are essentially a consequence of the local corrosivity/irritancy.
	j)	***Aspiration hazard*** Sulphur trioxide and Sulphuric acid: not classified

SECTION 12: Ecological information	
12.1	**Toxicity** Not classified as CMR and PBT or vPvB substance and does not meet the classification criteria for environmental hazards. The aquatic toxicity of sulphur trioxide is addressed by read-across from sulphuric acid. Read-across from sulphuric acid is justified based on the rapid reaction of sulphur trioxide with water to form sulphuric acid.
	Fish LC50 for freshwater fish: 16 mg/l; long term toxicity for NOEC (LOEC/2) freshwater fish: 0.025 mg/l
	Algae EC50 (72 h): > 100mg/l test mat. (nominal) based on: growth rate
	Daphnia EC50 for freshwater invertebrates: 100 mg/l; long term toxicity for freshwater invertebrates NOEC: 0.15 mg/l
	Bacteria Sulphuric acid : Available non-standard data for the read-across compound sodium sulphate report NOECs for bacteria in sewage sludge of 26 -30 g/l. Sulphur trioxide: no data available
12.2	**Persistence and degradability** Not biodegradable (inorganic acids cannot be considered biodegradable) Sulphuric acid has no potential to persist. Sulphuric acid dissociates readily to hydrogen (hydronium) ions and sulphate ions, both of which are ubiquitous in biological systems.
12.3	**Bioaccumulative potential** Sulphuric acid has no potential to bioaccumulate. Sulphuric acid dissociates readily to hydrogen (hydronium) ions and sulphate ions, both of which are ubiquitous in biological systems.
12.4	**Mobility in soil** Not applicable. Given the rapid breakdown in water of sulphuric acid and the very limited atmospheric emissions there is no significant exposure to soil or groundwater expected. There is no direct exposure via sludge spreading.
12.5	**Results of PBT and vPvB assessment** Sulphuric acid is neither a PBT nor a vPvB substance.
12.6	**Other adverse effects** Other ecotoxicological advice: Do not release untreated into natural waters.

SECTION 13: Disposal considerations – in accordance with national directions	
13.1	**Waste treatment methods**
	a) Possible hazards in disposing of the substance and contaminated packaging Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste List (EWL).
	b) Physical/chemical properties that may affect waste treatment corrosive
	c) Avoiding waste disposal through sewerage Do not release untreated into natural waters.
	d) Special precautions for any recommended waste treatment Czech Republic: Waste Act No. 185/2001 Sb., as annotated, Waste catalog (decree No. 381/2001 Sb.) as annotated. European Union: Directive of the European Parliament and Council No. 2006/12/ES on waste

SECTION 14: Transport information

1831 SULPHURIC ACID, FUMIG
(Oleum)

14.1 UN number

1831

14.2 UN proper shipping name

ADR	SULPHURIC ACID, FUMIG
RID	SULPHURIC ACID, FUMIG
IMDG:	
ICAO/IATA:	

14.3 Transport hazard class(s)

ADR	*RID*	*IMDG:*	*ICAO/IATA:*
8	8	8	8

Classification

ADR	*RID*
CT1	CT1

14.4 Packing group

ADR	*RID*	IMDG:	*ICAO/IATA:*
I	I	I	I

Hazard Identification No. (Kemler)

ADR
X886

Labels

ADR	*RID*	*IMDG:*	*ICAO/IATA:*
			

Note

ADR	*RID*	*IMDG:*	*ICAO/IATA:*
		Marine pollutant: EmS:	PAO: CAO:

14.5 Environmental hazards

No

14.6 Special precautions for user

No

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No

SECTION 15: Regulatory information

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

Regulation of the European Parliament and Council (EC) No. 1907/2006 REACH
Regulation (EC) 1272/2008 on classification, labelling and packaging (CLP) of substances and mixtures

15.2 Chemical safety assessment

Chemical safety assessment was carried out.

SECTION 16: Other information

a) The changes in case of a revised safety data sheet

New safety data sheet according to Annex II Regulation (EC) 1907/2006

b) A key or legend to abbreviations and acronyms

PBT persistent, bioaccumulative and toxic
vPvB very persistent, very bioaccumulative
Skin Corr. 1A Skin corrosion/irritation, Hazard Category 1A
STOT SE 3 Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation

c) Key literature references and sources for data

Regulation of the European Parliament and Council (EC) No. 1907/2006
Registration documentation according to Direction (EC) 1907/2006 REACH
Appendix I, IV, VI a VII from Direction (EC) 1272/2008 CLP

Act No. 350/2011 Sb. on chemical substance and on chemical preparations and on changes in certain laws, as annotated
Act No. 258/2000 Sb. on the protection of public health and on changes in certain related laws, as annotated
Governmental decree No. 361/2007 Sb., that stipulates the conditions of protecting employees' health at work

d) **List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements**

H-phrases	H314: Causes severe skin burns and eye damage. H335: May cause respiratory irritation. EUH014 Reacts violently with water.
P-phrases	P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

e) Training appropriate for workers

People handling the product must be informed about the risk of possible life and health hazards and about requirements for the protection of health and environment (see the respective provisions of Labor Code)

f) More information

Safety Data Sheet has been prepared in accordance with the Regulation of the European Parliament and Council Regulation (EC) no. 1907/2006. Safety Data Sheet contains data necessary for ensuring safety and health at work and environmental protection. These data correspond to the current state of knowledge and experience and are in compliance with applicable laws and regulations. They cannot be considered a guarantee of suitability for a specific application. For compliance with local laws in force in the responsibility of the buyer.
According to Article 35 of the European Parliament and Council Regulation (EC) no. 1907/2006 requires each employer to enable workers and their representatives access to the information from MSDS substances / preparations, the worker uses or whose effects may be exposed during their work.