Finnish Institute of Occupational Health

Safety Data Sheets As A Source Of Information

The safe use of chemicals requires awareness of the chemicals' composition, hazardous properties and how and where they can be used safely.

Safety data sheets (SDS) provide the user of a chemical with the required information of the chemical's hazardous properties and how to use it safely. Because of this, all SDSs should be made available to the employees at the workplace.

SDSs ARE PREPARED for chemicals classified as hazardous and chemicals that contain hazardous ingredients that are sold for industrial or professional use. SDSs are provided by the distributor of the chemical upon the first delivery of the chemical. SDSs are provided for free in printed or digital form in Finnish or, if necessary, in Swedish. SDSs must be kept up to date. Hazard classification related to the chemical must be included in the product labelling. In addition, the workplace must keep a record of all chemicals classified as hazardous used at the workplace (list of chemicals).

The employer is responsible for carrying out a risk assessment of the workplace and providing employees with training on safe working practices. (Occupational Safety and Health Act 738/2002, Government Decree 715/2001).

SAFETY DATA SHEETS are used by a variety of groups, such as employers, occupational safety and health personnel, occupational health physicians and nurses, first aid personnel and employees. A common basis for SDSs agreed in advance make it easier to use the sheets in different situations. Where to use a safety data sheet:

- Procurement of chemicals
- Storage and handling of chemicals
- Lists of chemicals and risk assessments
- Risk management and training
- Planning medical examinations
- Planning first aid preparedness
- Employee training
- Environmental risk assessment and management

Safety data sheets provide information about the hazardous properties of a chemical and how to handle it safely.

What kind of information does an SDS include?

1. **Identification of the Substance/Mixture and of the Company/Undertaking:** The first page contains the chemical's trade name and the details of the supplier of the chemical as well as the uses of the chemical for which the chemical has been registered in compliance with the REACH regulation.

For more information about the product or how to use it, you may contact the supplier of the chemical.

2. **Hazards Identification:** The hazards classification of the product and label elements provide a general overview of the hazards that may be related to the use of the chemical. The hazard statements (H statements) are used in the risk assessment of the workplace when assessing the hazards related to the chemical's properties.

3. **Composition/Information on Ingredients:** In addition to the names of the hazardous ingredients contained by the chemical, the table indicates the classification and concentration of the ingredient (%).

4. **First Aid Measures:** The section on first aid measures describes the measures to be taken if a chemical has been inhaled, come in contact with skin or eyes or swallowed. The most important symptoms and effects of exposure are also described here.

The occupational health care service provider will support the workplace in planning first aid preparedness.

REMEMBER TO TAKE PRECAUTIONS! THE CORNERSTONE OF CHEMICAL SAFETY IS PAYING ATTENTION TO SAFETY ASPECTS BEFORE BEGINNING WORK.

5. **Firefighting Measures:** Appropriate extinguishing media for fires and other instructions concerning firefighting.

7. **Handling and Storage:** Instructions for the safe handling and storage of the chemical. The instructions may be related to handling and storage conditions, equipment or other technical solutions, such as ventilation.

8. **Exposure Controls/Personal Protection:** Instructions for preventing employees' exposure (e.g. ventilation and other technical measures, personal protective equipment). The sheet also includes the work-related exposure limits (Finnish Occupational Exposure Limits and biological exposure index values) used in the employees' exposure assessment.

Please note that the general measures (ventilation) should be adopted before individual measures (respirators). As a result of the REACH regulation, some safety data sheets will include exposure scenarios, i.e. descriptions on how to use the chemical safely. The tasks-specific conditions and measures that ensure that the use of the chemical is safe are described in these exposure scenarios.

It is also recommended to prepare brief instructions for different locations of the workplace that specify the personal protective equipment required in a task and other important aspects of safe work.

Contact the supplier of the chemical if the instructions on the SDS are not sufficient.

INSTRUCTIONS FOR EMPLOYERS

1. Ensure that the workplace's chemical procurement process is in order. Learn more from the chemical procurement control approach!
2. Assess the employees' health risks caused by the work and carry out the improvements specified in the risk assessment.
3. Make sure that the employees have understood the instructions concerning safe working practices (e.g. technical aids and personal protective equipment).
4. The safety data sheets must be available to the employees.
5. Contact the supplier of the chemical if the instructions on the SDS are not sufficient.

INSTRUCTIONS FOR EMPLOYEES

1. Make sure that the employer has provide you with training and instructions on how to use the chemical.
2. Study the chemical's hazardous properties before starting work and be aware of the potential risks.
3. Make sure that you understand the instructions on how to handle and store the chemical safely.
4. Ensure that you know how to act in a case of emergency or accident.
5. Make sure that the safety data sheet has the same name of the chemical as the labelling of the product.
6. If you are uncertain, consult your employer!

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Example Of Safety Data Sheet (SDS)

SAFETY DATA SHEET

Date: 2.5.2018 Former date: 13.4.2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name / Substance name

DEGREASER A

Company product code

1122300

REACH Registration number

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

The uses of the chemical Degreasing, cleaning

1.3 Details of the supplier of the Safety Data Sheet

CHEMICALS Ltd

Street address	Tehtaankatu 1
Postcode and post office	00100 Helsinki, Finland
Post-office box	PO Box 100
Postcode and post office	FI-00100 Helsinki, Finland
Telephone number	+358 000 000 00
E-mail address	customerservice@chemicals.com

1.4 Emergency telephone number

Poison Information Centre, tel. +358 9 471 977 /

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

1272/2008 (CLP)

Skin Corr. 1A, H314

2.2 Label elements

1272/2008 (CLP)

Pictograms

Signal word : **Danger**

Hazard statements

H314 : Causes severe skin burns and eye damage.

Precautionary statements

P260 : Do not breathe dust/fume/gas/mist/ vapours/spray.

P264 : Wash skin thoroughly after handling.

P303+P361+P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338+P310 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

P405 : Store locked up.

P501 : Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards

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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Substance name	CAS-, EC- or index number	REACH Registration No.	Concentration	Classification
Hydrochloric acid	7647-01-0 / 231-595-7	-	10-30%	Skin Corr. 1B, 314 STOT SE 3, H335
Sulfuric acid	7664-93-9 / 231-693-5	01-2119458838-20	<5%	Skin Corr. 1A, H314

Full text for all hazard statements are displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

INHALATION: Remove individual to fresh air. Give artificial respiration if difficulties in breathing. Seek medical attention if difficulties in breathing or if respiratory irritation develops.
SKIN CONTACT: Immediately flush skin with plenty of water for 15 minutes and remove contaminated clothing. Seek medical attention.
EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
INGESTION: Seek for medical attention immediately. DO NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, corrosion, burning sensation.

4.3 Indication of any immediate medical attention and special treatment needed

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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Will not burn. Choose extinguishing media suitable for surrounding materials.

5.2 Special hazards arising from the substance or mixture

During a fire, irritating and highly toxic gases may be generated.

5.3 Advice for firefighters

Fire-fighting equipment with self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Stop leak if safe to do so. Wear adequate protective equipment at all operations. Avoid inhalation of mist or vapours and contact with skin and eyes. Evacuate all nonessential personnel.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and material for containment and cleaning up

Soak up with non-combustible absorbent material (e.g. sand) and transfer to a marked container for disposal.

6.4 Reference to other sections

See Section 7 and 8 for precautionary measures and personal protection.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation of mist or vapours and contact with skin and eyes. Use personal protective equipment and exhaust ventilation. Do not eat, drink or smoke when using this product. Emergency shower and eyewash facilities needed.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals (bases, oxidizers). Keep container(s) closed.

7.3 Specific end use(s)

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

National occupational exposure limit values

Hydrochloric acid	5 ppm (7.6 mg/m3)/15 min
Sulfuric acid	0,05 mg/m3/8h; 0,1 mg/m3/15 min
(HTP values, Finland)	

DNEL

Sulfuric acid (long-term, inhalation)	0,05 mg/m3
Sulfuric acid (short-term, inhalation)	0,1 mg/m3

PNEC

Sulfuric acid (aqua, freshwater)	0,003 mg/l
Sulfuric acid (sediment, freshwater)	0,002 mg/kg

8.2 Exposure controls

Appropriate engineering controls

Use local exhaust ventilation or fume hood. Handle in accordance with good industrial hygiene and safety practices.

Eye / face protection

Face shield.

Skin / hand protection

Wear protective gloves and protective clothing (recommended material: butyl rubber, neoprene, Viton).

Respiratory protection

Full mask filter devise (B2-E2-P3) or self-contained breathing apparatus.

Environmental exposure controls

Take precautions against leakage by constructing collecting pools and sewerage systems.