

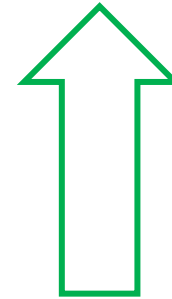
Hazard communication – Labels & Safety Data Sheets

ITP Course September 2014
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What is GHS?

Safe use of chemicals



Risk Management
• Risk Communication,
• Exposure monitoring/control

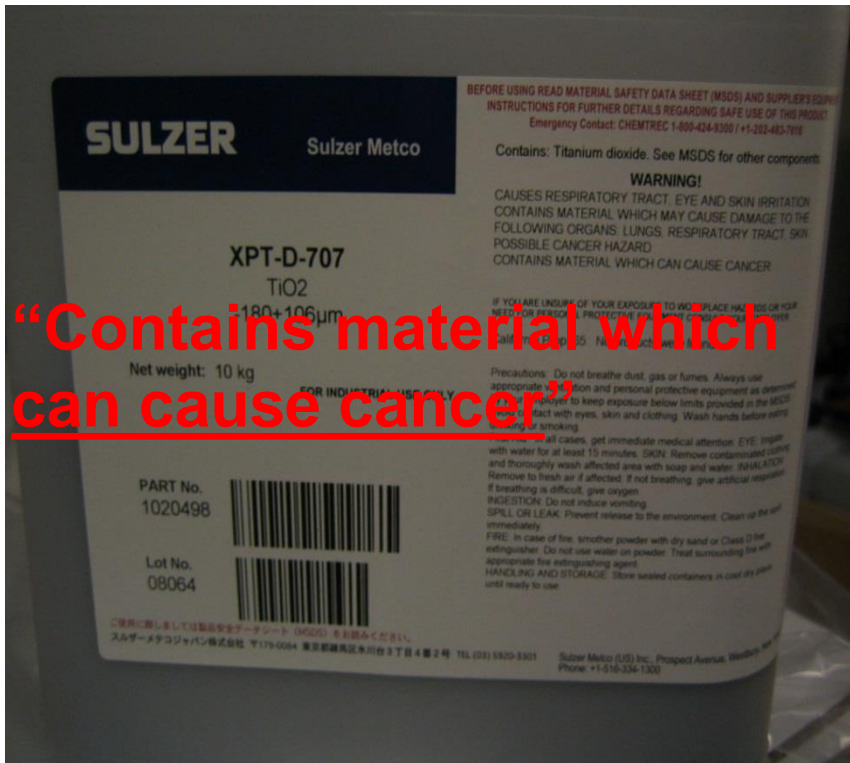
Hazard communication
(Labels and SDS)

GHS Classification

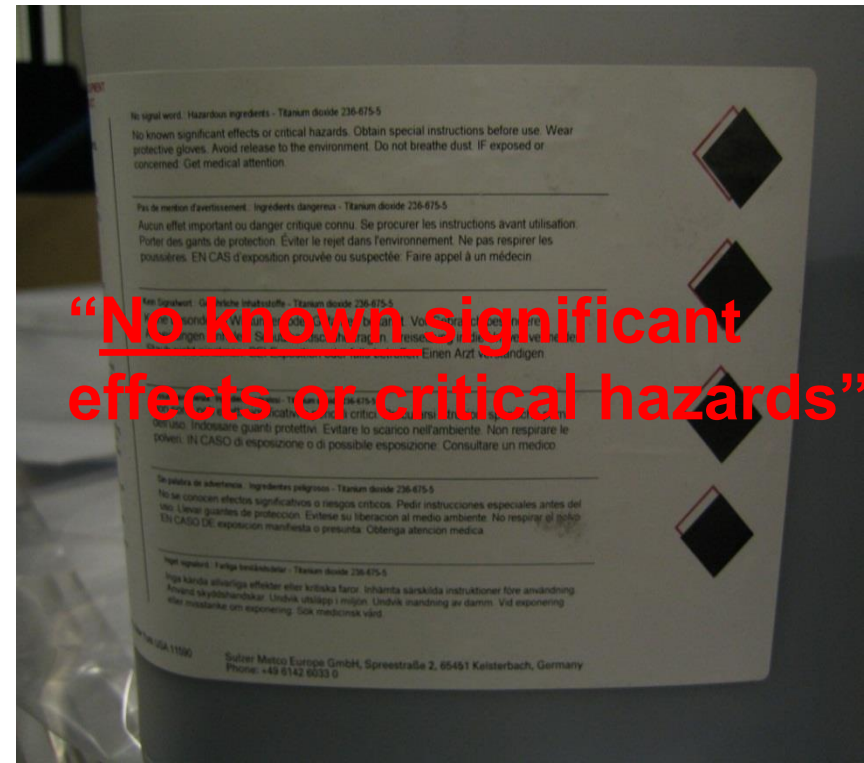
Different hazard information for different markets....

US

Europe



"Contains material which can cause cancer"



"No known significant effects or critical hazards"

Elements of the GHS

- Harmonized criteria for classifying substances and mixtures according to their physical, health, and environmental hazards
- Harmonized hazard communication elements, including requirements for labelling and safety data sheets.

Responsibilities/roles of actors

- **Enterprises** are responsible for
 - a safe marketing of chemicals
 - a safe use of chemicals
- **Government/agencies**
 - steer
 - guide
 - supervise

Hazard communication

- **Purpose**
 - *To inform of hazardous properties and give information of how to reduce risk for damage*
- **Labelling**
 - Consumers - **only** information
 - Professional users - 1:st warning
- **Safety Data Sheet**
 - Substantial information for professional users



Labelling of Chemical Products



What is a label?

What is a label and when/ where will you see one?

- Hazard communication tool providing information regarding the hazards of chemicals including advice on safe use
- Labels will be present on all chemicals representing a hazard


Labelling according to CLP/GHS

(article 17)

- Name, address and telephone number of the supplier
- Product identifiers (trade name and the identity of all substances that contribute to the classification)
- Hazard pictograms
- Signal words
- Hazard statements
- Precautionary statements
- Section for supplemental information
- Nominal quantity, consumers (EU)

www.kemi.se

Elements of a label

Pictogram	
Signal word	Danger Warning
Hazard statement	H###
Precautionary statement	P###



Trade name of the mixture



Hazard pictogram

Danger **Signal word**

Highly flammable liquid and vapor
Causes serious eye irritation
May cause drowsiness or dizziness

Hazard statements

Keep out of reach for children
Keep away from heat/sparks/open flames/hot surfaces — No smoking
Store in a well-ventilated place
Keep container tightly closed
Wear eye protection
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary statements

Content: substance X, substance Y Company, contact info, 500 ml
Product identifiers **nominal quantity**

Application of labels



- Firmly affixed
- Horizontally
- The label elements shall be clearly and indelibly marked
- They shall be of such size and spacing as to be easily read
- Hazard pictogram, 1 cm²
- The label elements can be shown on the packaging itself

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Safety Data Sheets

Safety Data Sheet
according to 1907/2006/EC, Article 31


Printing date 30.09.2010

1 Identification of substance:

Product name: Chlorine dioxide No.1
Catalog number: 501271
Application of the substance / the preparation: Reagent for water analysis
Supplier:
Tintometer GmbH
Schleierstr. 8-12
DE-44287 Dortmund
Made in Germany
www.tintometer.de
Informing department:
e-mail: produktisicherheit@tintometer.de
Product Safety Department
Contact for technical details:
Technical Department
e-mail: technik@tintometer.de
Emergency information:
Poison Center Berlin, Germany
phone: 0049-30 30686 7990


2 Hazards identification


Hazard designation:

 T Toxic

Information pertaining to particular dangers for man and environment
The product has to be labelled due to the calculation procedure of the "General Classification and Labelling" (1999/45/EC) in the latest valid version.
R 60 May impair fertility.
R 61 May cause harm to the unborn child.
R 41 Risk of serious damage to eyes.
Restricted to professional users.

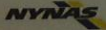
GHS label elements

 **Danger**
H360 - May damage fertility or the unborn child.

 **Danger**
H318 - Causes serious eye damage.

Prevention:
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.

Nyflex 8120
SAFETY DATA SHEET



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

1.1 Product identifier

Product name Nyflex 8120
CAS number 64742-46-7
EC number 265-148-2
Product description Process oil
Product type Liquid
Other means of identification Distillate (petroleum) hydrotreated middle

REACH Registration number	Legal entity
01-2119489867-12-0004	Nynas AB

1.2 Identified uses
See
CHEMICAL SAFETY REPORT Part B Other Gas Oils. See sections for classifications as Xn; R20, Xi; R38, Xn; R65; N; R51/53.

1.3 Details of the supplier of the safety data sheet
Nynas AB
P.O. Box 10700
SE-121 29 Stockholm
SWEDEN
+46 8 602 12 00
www.nynas.com
e-mail address of person responsible for this SDS ProductHSE@nynas.com




1.4 Emergency telephone number
National advisory body/Poison Centre
Telephone number : +44 (0) 1235 239 670 (NCEC)
Hours of operation : 24 hour service

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Product definition UVCB
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Acute Tox. 4, H332
Skin Irrit. 2, H315
Asp. Tox. 1, H304
Aquatic Chronic 2, H411
Classification according to Directive 67/548/EEC [DSD]
Europe
Xn; R20, R65
Xi; R39
N; R51/53

2.2 Label elements

Hazard pictograms

Signal word **Danger**

Date of issue/Date of revision	2011-02-11.	1/11
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Intention of SDS

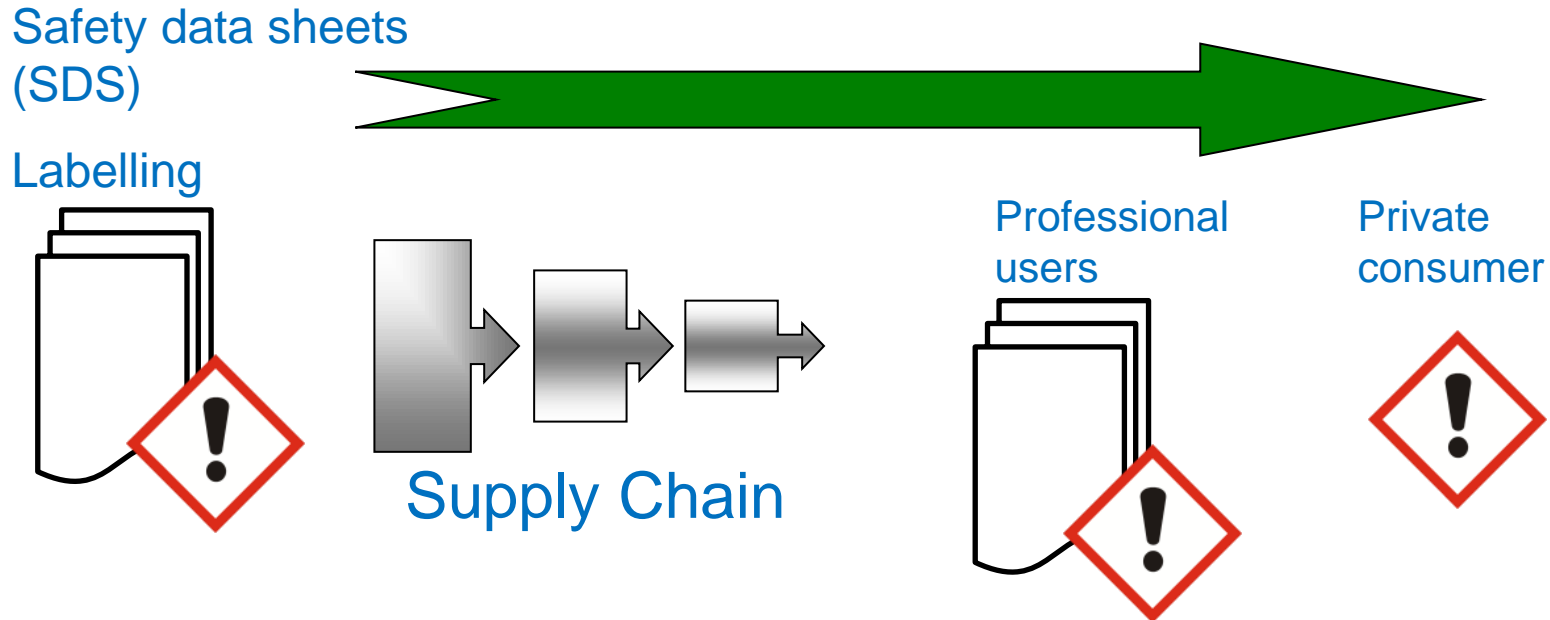
- ✓ Comprehensive information to professional users of how to protect health and the environment
- ✓ Tool for the employer to perform risk assessment at the workplace



Increased safety at the workplace and increased protection for health and environment

- ✓ A carrier of information throughout the distribution chain of chemical products

Flow of product information



SDS – Obligations

REACH art. 31.1/GHS chapter 1.5

A supplier of hazardous substances or mixtures shall provide professional users with SDS.

- Supplier: a manufacturer, importer, downstream user or distributor placing a substance/mixture on the market
- Hazardous substance/mixture meets the criteria for classification

SDS – Obligations

GHS 1.5.2 / Article 31.3



SDS for non-classified chemical products shall be supplied to professional user on request if the product contains :

- ✓ at least 1 % (0,2 % for gases) of a health or environmental hazardous substance
- ✓ at least 0,1 % of a PBT or vPvB substance
- ✓ a substance for which there are Community workplace exposure limits

SDS – Obligations

Article 31.5 & 31.8

- Language(s) – “..in an official language of the MS(s) where the substance or mixture is placed on the market, unless the MS concerned provide otherwise”
- When and in what way – “..free of charge on paper or electronically no later than the date on which the substance or mixture is first supplied”

SDS – Updating

GHS 1.4.7.2 / Article 31.9

- ✓ Whenever new data appears
- ✓ Once an authorisation has been granted or refused (EU)
- ✓ Once a restriction has been imposed (EU)

- ✓ Date of issue and revision
- ✓ To everybody who have bought the product in the last twelve months (In EU)
- ✓ Free of charge

SDS - Design

Annex IV GHS



- ✓ Easy to read and understand
- ✓ Clear and concise
- ✓ All relevant data necessary to prevent injury and to protect the environment
- ✓ Date of issue
- ✓ 16 mandatory sections

SDS should be prepared by a competent person.

SDS – 16 sections

GHS 1.5.3.2

- 1. Identification of the substance/mixture and of the company/undertaking**
- 2. Hazard identification**
- 3. Composition/ information of ingredients**
- 4. First aid measures**
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls / personal protection

- 9. Physical and chemical properties**
10. Stability and reactivity
- 11. Toxicological information**
- 12. Ecological information**
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

Identification of the substance/preparation and of the company/undertaking

Section 1

- Product identifier
- Use of chemical product
- The name, address and telephone of the supplier
- E-mail address to the competent person responsible for the SDS (In EU)
- Telephone number for emergency

Hazards identification

Section 2

- **Classification** (both CLP and DSD for substances until 2015 in the EU)
- **Label elements** appearing on the label
- **Other hazards**, which do not result in classification

2. Hazards Identification

2.1 Classification of the substance

Classification according to DSD

Xi;Irritating to eyes and skin; R 36/38

Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment ; R 52/53

Classification according to GHS (CLP, EG nr 1272/2008)

Causes skin irritation, category 2; H315

Causes serious eye irritation, category 2; H319,

Harmful for aquatic life with long lasting effects, kategori chronic 3; H412

2.2 Label elements



Warning

Causes skin irritation

Causes serious eye irritation

Harmful for aquatic life with long lasting effects

+ precautionary statements

Composition/information on ingredients

Section 3



- Substance name
- CAS number, IUPAC name
- Concentration or concentration interval
- Classification of substances
 - category and H-statements

Example

3. Composition/information on ingredients

3.2 Mixtures

Component		Classification	Conc
CAS: 107-41-5 EINECS: 203-489-0 Registrationsnummer:	2-metyl-2,4-pentandiol	Irritating Xi; R36/38 ----- Eye irrit . 2; H319, Skin irrit. 2; H315	68 %
CAS: 126-86-3 EINECS: 204-809-1 Registrationsnummer:	5-Decyne-4,7-diol, 2,4,7,9-tetrametyl	Irritating Xi; R36-52/53 ----- Eye irrit . 2; H319, Aquatic chron. 3; H412	32 %

Remark: The phrases given are written out in full text in section 16.

4. First aid measures



- Instructions for first aid measures subdivided to exposure routes
- Medical treatment?
- Short summary of symptoms and effects
- Means of assistance/equipment at the workplace

5. Fire-fighting measures

- Extinguishing media
- Extinguishing media NOT to be used
- Exposure hazards arising from the product
- Special protective equipment for fire-fighters?



6. Accidental release measures

- Personal protection
 - e.g. respiratory protection, prevention of skin and eye contact
- Environmental precautions
- Methods of cleaning up
 - e.g. absorbent material



7. Handling and storage

- Assistance to the employer in choosing equipment and procedures for his handling and storage.
- Handling:
 - Advice on technical measures
- Storage:
 - Specify conditions for safe storage



8. Exposure controls / personal protection

- Exposure limit values
- Parameters that needs to be controlled during the use.
- National limit values.

- Exposure controls
- Occupational/environmental exposure control.
- Personal protective equipment (PPE) for respiration/hand/eye/skin



Physical and chemical properties

Section 9

- ✓ General information, e.g. appearance, odour
- ✓ Important health, safety and environmental properties, e.g. pH, boiling point, viscosity, density, solubility, flashpoint

10. Stability and reactivity

- Conditions to avoid, e.g. light, temperature, pressure
- Other materials to avoid
 - E.g. water, air, acids/bases, oxidising agents
- Hazardous decomposition products



Toxicological information

Section 11

- A complete description of health effects
- Available data to identify those effects
- Information on likely routes of exposure & effects via each possible route
- Known symptoms
- Effects – immediate, delayed and chronic

Ecological information

Section 12

- Information about environmental hazards
- Examples of relevant information;
 - toxicity (acute and long-term)
 - test methods/ tested organism(s)
 - persistency and degradability
 - bioaccumulation
 - mobility in soil



13. Disposal considerations

- Specify the appropriate methods of disposal of both the substance or mixture and any contaminated packing e.g. recycling
- Refer to any relevant provisions relating to waste



14. Transport information

- Transport classification for:
 - Road
 - Rail
 - Sea
 - Air
- This might include:
 - UN number,
 - class,
 - proper shipping name,
 - packing group,
 - marine pollutant



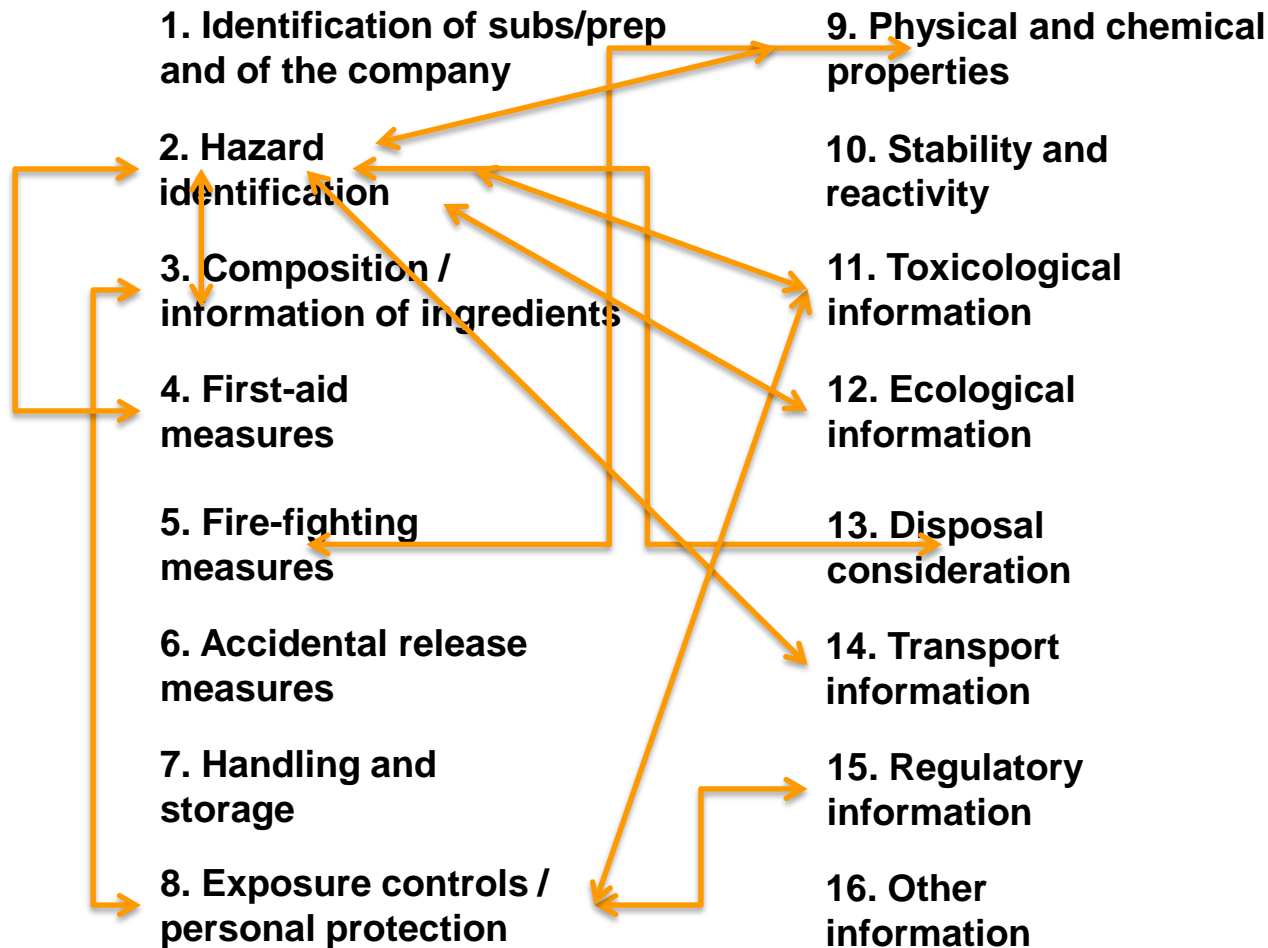
15. Regulatory information

- If subject to any prohibition or restriction in the country or region into which it is being supplied
- National laws of relevance



16. Other information

- Examples:
 - list of relevant hazard statements
 - training advise
 - sources of key data
 - for revised SDS, indication of what is new



SDS - Examination

- ✓ Correct classification of substances/product ?

Use ECHA database "[INVENTORY](http://echa.europa.eu/information-on-chemicals/cl-inventory-database)" (<http://echa.europa.eu/information-on-chemicals/cl-inventory-database>)

- Agreement between heading 2 and label!
- ✓ Information consistent (Remaining headings)?
- ✓ Is information in SDS:
 - Easy to read and understand? - Relevant and reliable?
- ✓ Distribution of SDS



Some non-compliances observed

- No SDS or not provided to buyer
- SDS not in Swedish
- Incorrect classification or classification missing \Rightarrow information incorrect or missing in SDS
- Concentration interval too wide – unclear classification
- Inconsistent information within SDS
- Inconsistent information SDS – label

SANCTIONS

Safety Data Sheet



Reported to prosecutor

- ✓ 29 kap MB 6 § 5 a & b

Offence

- Not providing SDS to buyer
- Providing incorrect or insufficient information in SDS (depends on the severity)

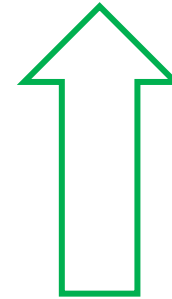
Environmental Sanction Fee

- Providing SDS not in Swedish, 5 000 skr.

Summary / conclusion

- SDS are intended for professional users, not private consumers
- 16 mandatory headings
- The information in SDS shall be
 - Easy to read and understand
 - Relevant, reliable and consistent
- It is the supplier that is responsible for that the information in SDS is correct
- SDS are not authorized by any Authority

Safe use of chemicals



Risk Management
• Risk Communication,
• Exposure monitoring/control

Hazard communication
(Labels and SDS)

GHS Classification



Summer in Stockholm....