1. Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- Trade name: Vulcanizing solution L-1000
- Article number: H 0308

- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.
- Application of the substance / the preparation Adhesives
- Details of the supplier of the safety data sheet

Manufacturer/Supplier:
NILOS GmbH & Co. KG, Reisholzstr. 15, 40721 Hilden, Germany
Phone: +49 2103 951 - 0
Fax: +49 2103 951 - 199

Emergency telephone number: +49 173 5306827

2.1 Possible hazards

- **Classification of the substance or mixture**
- **Classification in accordance with (EU) no. 1272/2008**

Ign. fl. 2	H 225	Liquid and vapor easily ignitable.
Asp. 1	H 304	Can be deadly when swallowed and if it penetrates of the respiratory system.
Aqu. chron. 1	H 410	Very toxic to aquatic organisms with long-term effect.
Skin irr. 2	H 315	Causes skin irritations.
Eye irr. 2	H 319	Causes severe eye irritation.
STOT once 3	H 336	Can cause sleepiness and drowsiness.

- **Special hazards for humans and the environment:**
  The product must be characterized based on the calculation process „General characterization guideline for preparation of the EU" in its current version. Has a narcotic effect. Inhaling the vapors can result in irritation of the breathing system (coughing, nausea, shortness of breath, etc.). Due to the degreasing effect of the solvent, dermatitis (skin infection) can occur after longer or repeated skin contact.

2.2 Possible hazards

- **Classification system**
  The classification is in accordance with the current EU lists, however, it is supplemented by subject literature and company information.

- **Identification elements**
- **Identification in accordance with (EU) No. 1272/2008**
  The product is classified and identified in accordance with CPL regulation.

- **Hazard icons**


GHS02


GHS07


GHS08


GHS09

- **Signal word: hazard**

- **Hazard determining components for labeling:**
  Cyclohexane
  Naphtha, treated with hydrogen, light
- **Hazard information**

H 225	Liquid and vapor easily ignitable.
H 315	Causes skin irritations.
H 319	Causes severe eye irritation.
H 336	Can cause sleepiness and drowsiness.
H 304	Can be deadly when swallowed and if it penetrates the respiratory system.
H 410	Very toxic to aquatic organisms with long-term effect.

- **Safety information**

P210	Keep away from heat/sparks/open flames/hot surfaces. Do not smoke.
P 280	Protective gloves/protective clothing/wear eye protection/face protection.
P 273	Prevent release to the environment.
P 243	Take measures against electrostatic charges.
P301+P310	IF SWALLOWED: Call POISON INFORMATION CENTER or physician.
P303+P361+P353	IN CASE OF SKIN CONTACT (or contact with hair): Remove all contaminated, soaked clothes immediately. Wash skin with water, take a shower.
P305+P351+P338	IN CASE OF CONTACT WITH EYES: Flush for a few minutes thoroughly with water: If possible, remove contact lenses. Continue to flush.
P331	DO NOT force vomiting.

- **Other hazards**
- **Results of the PBT and vPvB evalution**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3. Composition/information for ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the following substances:

Hazardous ingredients		
CAS: 110-82-7 EINECS: 203-806-2 Reg.-No.: 01-2119463273-41	Cyclohexan Xn R65; Xi R38; F R11; N R50/53 R67	25 - 50 %
	Entz. Fl. 2, H225; Asp. 1, H304; Aqu. chron. 1, H410; Hautreiz. 2; H315; STOT einm. 3, H336	
CAS: 141-78-6 EINECS: 205-500-4 Reg.-No.: 01-2119475103-46	Ethylacetat Xi R36; F R11 R66-67	25 - 50 %
	Entz. Fl. 2, H225; Augenreiz. 2, H319; STOT einm. 3, H336	
CAS: 64742-49-0 EINECS: 265-151-9	Naphtha, mit Wasserstoff behandelte, leichte Xn R65; Xi R38; F R11; N R51/53 R67	10 - 25 %
	Entz. Fl. 2, H225; Asp. 1, H304; Aqu. chron. 2, H411; Hautreiz. 2, H315; STOT einm. 3, H336	

- **add. information:** The wording of the included hazard information can be found in section 16.

4. First aid measures

- **Description of the first aid measures**
- **General information:**
  Move the affected person out of the hazard area and lay down the person. Immediately remove clothes contaminated with product.
- **After inhaling:**
  Ensure good ventilation with fresh air. Consult physician if ailments continue. In case of breathing arrest or irregularity provide mouth to mouth resuscitation or oxygen ventilation and call physician immediately. In case of unconsciousness place and transport in stable side position.
- **After skin contact:**
  Wash immediately with water and soap and flush thoroughly. Consult physician if irritation continues.
- **After eye contact:**
  Flush eyes immediately for several minutes under flowing water while eye lid is open and consult physician.
- **After swallowing:**
  Do not force vomiting. Do not let person drink. Involve physician immediately. In case of spontaneous vomiting, keep head below hip height to prevent aspiration of the product.
- **Information for the physician:**
  Due to risk of aspiration, irrigation of the stomach only under endotracheal intubation. Re-establish grease film of the skin to prevent dermatitis (skin inflammation). Symptomatic treatment.
- **Most important acute symptoms and effects and those that occur delayed:**
  Headache, Dizziness, Drowsiness, Nausea, Unconsciousness, Stomach-bowel ailments

5. Fire Fighting Measures

- **Extinguishing agents:**
- **Suitable extinguishing agents:**
  CO_2, extinguishing powder or water spay jet. Fight larger fire with water spray jet or alcohol resistant foam.
- **Inapplicable extinguishing agents for safety reasons:** Full water jet.
- **Special hazards that are caused by the substance or mixture:**
  Creation of explosive vapor/air mixtures possible. Carbon monoxide CO may develop if combustion is incomplete. Vapors are heavier than air and spread on the floor. Ignition possible across large distances. Prevent contact with flammable substances.
- **Information for fire fighting:**
- **Special protection equipment:**
  See item 8. Wear full protection suit breathing apparatus that is independent of the ambient air.
- **Additional information:**
  Collect contaminated extinguishing water separately, keep it from getting into the canalization. Cool containers that are at risk in the environment with water spray jet.

6. Unintended release measures:

- **Person related precautions, protective quipment and processes to be applied in case of emergency:**
  Wear protective equipment. Keep unprotected person away. Extinguish naked flames. Remove ignition sources. Do not smoke. Avoid sparks. Prevent contact with skin, eyes and clothes. Do not inhale vapors. Thoroughly ventilate affected rooms. Take measures against electrostatic charges.
- **Environmental protection measures:**
  Prevent leakage into canalization, cavities, basements and water bodies. Inform the responsible public authorities immediately in case of leakage into water bodies or canalization. Inform the responsible public authorities if larger volumes are released.
- **Methods and substance for retention and cleaning:**
  Collect with liquid binding substance (sand, pebble stone, acid binder, universal binder, saw dust). Ensure adequate ventilation. Dispose of contaminated substance as waste in accordance with item 13.
- **Reference to other sections:** Risk of explosions.

7.1 Handling and Storage

- **Handling**
- **Protective measure for safe handling:**
  Keep container tightly closed. Store cool and dry in carefully closed containers. Ensure good ventilation/exhaust at the storage of work location. Avoid longer or repeated skin contact. Avoid aerosol generation.
- **Information about fire and explosion protection:**
  Use only in explosion protected area. Use explosion protected equipment/armatures and spark-free tools. Keep sources of ignition away - no smoking. Take measures against electrostatic charges.
- **Conditions for safe storage under consideration of incompatibilities**
- **Storage:**
  Keep away from direct sun radiation and other heat and ignition sources. Store cool and dry in carefully closed containers.

7.2 Handling and storage

- **Requirements for storage rooms and containers:**
  Adhere to laws and regulations for the storage and use of water hazard substances. Store at a cool location.
- **Information for joint storage:**
  Adhere required to joint storage bans defined in Regulation of flammable liquids (VbF).
- **Other information on storage conditions:**
  Keep container tightly closed. Store cool and dry in carefully closed containers. Adherence to the VbF regulations and the associeted technical TRbF rules required.
- **Storage class:** 3 (VCI-concept, 2007: Guideline for the joint storage of chemicals).
- **Classification in accordance with the occupational safety regulation (BetrSichV):** Easy flammable

8.1 Limitation and monitoring of the exposure/personal protective equipment

- **Additional information for the design of technical systems:**
  Room ventilation or exhaust. Measures against electrostatic charges.
- **Parameters to be monitored**
- **Components with workplace-related limits that must be monitored:**

110-82-7 Cyclohexane (25 - 50 %)	
AGW	700 mg/m³, 200 ml/m³ 4(II); DFG
141-78-6 Ethyl acetate (25 - 50 %)	
AGW	1500 mg/m³, 400 ml/m³ 2(I); DFG, Y
64742-49-0 Naphtha, treated with water, light (10 - 25 %)	
AGW	1000 mg/m³ TRGS 900, Nr. 2, 9, Hydrocarbon mixtures

- **Additional information:** The lists valid at the creation are the basis for this information.
- **Limitation and monitoring of the exposure**
- **Personal protective equipment:**
- **General protection and hygiene measures:**
  Keep away from food, beverages and animal feed. Remove any soiled or soaked clothing immediately. Wash hands before breaks and at the end of the work day. Do not touch eyes and skin. Do not inhale vapors and atomized spray.
- **Inhalation protection:**
  Not required if room is ventilated well. Use a breathing filter unit for short term or low pollution; use circulating air independent breathing protection unit in case of intense or longer exposure.
- **Hand protection:**
  Protective gloves. The gloves must be impenetrable and resistant against the product/the substance/the preparation. Selection of the glove substance by adhering to the penetration times, permeation rates and the degradation.
- **Glove substance:**
  Nitrile rubber. The selection of a suitable glove is not only different depending on the substance but also depending on additional quality features and it is different for each manufacturer. The resistance of glove substances cannot be calculated in advance since the product is a combination of several substances and therefore it must be tested before use.
- **Prenetration time of the glove substance:**
  Our recommendation is the single short use as a protection against liquid splashes. For other applications, please contact a glove manufacturer. The exact penetration time can be obtained by the manufacturer of protective gloves and adherence to it is approximate.

8.2 Limitation and monitoring of the exposure/personal protective equipment

- **Eye protection:** Tight fitting protective goggles.
- **Body protection:**
  Standard protective work clothes. Chemical-resistant safety shoes or boots. Wear impermeable protective clothes of this solution in case skin contact can occur.

9. Physical and chemical properties

Information on basic physical and chemical properties
- **General Information**
- **Appearance:**

Form	liquid
Color	black
Odor	sweetish
pH-value	not applicable
Change of status	
Melting point/melting range	not determined
Boiling point/boiling range	76°C
Flash point	-18°C
Ignition temperature	260°C (lowest value of the individual components)
Self ignition	The product is not self igniting.
Risk of explosion	The product does not represent an explosion risk, however, the generation of explosive vapor/air mixture is possible.
Explosion limits	
lower	1,0 Vol %
upper	11,5 Vol %
Vapor pressure at 20°C	104 hPa
Density at 20°C	0,801 g/cm^3
Soluble in / mixable with water	not or little mixable
Viscosity:	15000 Ca. mPaS Cold

10. Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition/conditions to be avoided:**
  No decomposition for intended use.
- **Possibility of hazardous reactions:** Reaction with acids, alkalis and oxidation substances.
- **Hazardous decomposition products:**
  In case of fire, generation of carbon monoxide CO and carbon dioxide CO2.

11. Toxicological information

- **Information about toxicological effects**
- **Acute toxicity:**

Classification relevant LD/LC50 values		
110-82-7 Cyclohexane		
Oral	LD50	12705 mg/kg (rat)
64742-49-0 Naphtha, treated with hydrogen, light		
Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rab) > 3000 mg/kg (rbt)
Inhalative	LC50 / 4h	> 5 mg/l (rat) 88 mg/l (rat)

- **Primary irritation effect:**
- **At the skin:** Irritates the skin and the mucosa.
- **At the eye:** Possible irritation effect.
- **Allergization:** No allergic effect known.
- **Additional toxicological information:**
  Inhaling of concentrated vapors as well as oral comsumption results in anesthesia-like conditions and in headaches, dizziness, etc. Long lasting or repeated contact can degrease the skin and can result in skin inflammation (dermatitis). Aspiration into the lung can take place in case of swallowing and subsequent vomiting. This results in suffocation or a toxic edema of the lungs. Based on the calculation process of the General Classification Guideline of the EU for preparations in its current version, the product is classified for the following hazards: Harmful to health.

12. Environment related information

- **Toxicity**

Aquatic toxicity	
64742-49-0 Naphtha, treated with hydrogen, light	
EC50	1-10 mg/l (aquatic invertebrates) 1-10 mg/l (algae)
LC50	10-100 mg/l (fish)

- **Persistence and decomposability:** The product decomposes biologically.
- **Behavior in the environment compartments:**
- **Bio-accumulation potential:** The bio-accumulation potential is low.
- **Ecotoxic effects:**
- **Note**: Very toxic for fish.
- **Other ecological information:**
- **General information:**
  Must not get into the groundwater, into water bodies or into the canalization. In water bodies also toxic for fish and plankton. Very toxic for water organisms. Water hazard class 2 (internal classification): harmful to water (in accordance with VwVwS). Must not get into the groundwater, into water bodies or into the canalization.
- **Results of the PBT- and vPvB evaluation**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

13. Disposal information

- **Waste management processes:**
  The following information refers to the product that was kept in its original condition and not for further processed products. Other disposal paths may be required when mixed with other products; when in doubt, contact the supplier of the product or the local public authorities.
- **Recommendation:**
  Must not be disposed together with household waste. Do not release into sewer system. If possible, recycle, otherwise burn or deposit in approved waste system. Separate contaminated water through separator and dispose in accordance with directives from the public authority.
- **Waste key number:**
  Since 1.1.1999, the waste key numbers are not only product related but mainly application related. The waste key number valid for the application can be found in the European Waste Catalog.
- **Soiled packaging:** Disposal in accordance with the public authority regulations.
- **Recommendation:**
  Empty container completely and deliver it clean to a reconditioning or reprocessing system. Disposal of the containers only after consultation with the local public authorities. LEASED PACKING: After optimal emptying, close tight immediately and return to supplier without cleaning. It must be guaranteed that no foreign particles get into the packing. Other containers: Empty completely and deliver them clean to a reconditioning or reprocessing system. ATTENTION: Residues in the containers may increase the risk of an explosion. Do not cut, perforate or weld soiled containers.

14.1 Transport information

Transport by land ADR/RID and GGVSEB (cross boarder/domestic):	
ADR/RID-GGVSEB class	3 (El) Ignitable liquid substances
Number for identification of the hazard (Kentlernumber)	33
UN number	1993
Packing group	II
Hazard slip	3
Special identification	Symbol (Fisch and tree)
Orderly UN shipping designation	1993 FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANE, ETHYL ACETATE), spec. regulation 640D
Limited quantity (LQ)	LQ4
Transport category	2
Tunnel restriction code	D/E

14.2 Transport information

Sea ship transport IMDG/GGVSea:	
IMDG/GGVSea class	3
UN number	1993
Label	3
Packing group	II
EMS number	F-E-S-E
Marine pollutant	yes, Symbol (fish and tree)
Correct technical name	FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANE, ETHYL ACETATE)

Air transport ICAO-TI and IATA-DGR:	
ICAO/IATA class	3
UN/ID number	1993
Label	3
Packing group	II
Correct technical name	FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANE, ETHYL ACETATE)

- **UN „Model Regulation“:** UN1993, IGNITABLE LIQUID SUBSTANCE, 3, II
- **Environmental hazard:** The product contains substances hazardous to the environment: Cyclohexane
- **Special precautions for the user:** CAUTION, Ignitable liquid substances.

15. Legal regulations

- **Regulations for safety, health and environmental protection/specific legal regulations for the substance or the mixture.**
- **Domestic regulations:**
- **Information about employment restrictions:**
  Adhere to the employment restrictions for children and juveniles in accordance with guideline 94/33/EG and the respective national regulations is required.
- **Hazardous Incident Ordinance:** Substance group 2 (easily ignitable liquids): adherence to volume threshols required.
- **Classification in accordance with the occupational safety regulation (BetrSichV):** Easily ignitable.
- **Technical instructions air:** class NK, share in %: 50 - 100
- **Water hazard class:** WGK 2 (internal classification): water hazard
- **Substance safety evaluation:** A substance safety evaluation was not performed.

16. Additional information

The information is based on today's knowledge, however, it is not a guarantee of product characteristics and it does not establish a contractual legal relationship.

- **Relevant sentences**
  Complete wording of the hazard information provided in section 3 using abbreviations (H and R sentences). The sentences refer only to the content substances. The product identification is listed in section 2.

H225	Liquid and vapor easily flammable.
H304	Can be deadly when swallowed and if it penetrates of the respiratory system.
H315	Causes skin irritation.
H319	Causes severe eye irritation.
H336	Can cause sleepiness and drowsiness.
H410	Very toxic to aquatic organisms with long-term effect.
H411	Toxic to aquatic organisms with long-term effect.

- **Department that established data sheet:** See department that provides information.
- **Abbreviations and acronyms:**
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  IATA-DGR: Dangerous Goods Regulations by the „International Air Transport Association" (IATA)
  ICAO: International Civil Aviation Organization
  ICAO-TI: Technical Instructions by the „International Civil Aviation Organization" (ICAO)
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  CLP: Classification, Labelling and Packaging (Regulation (EC) no. 1272/2008
  LC50: Lethal concentrations, 50 percent
  LD50: Lethal dose, 50 percent