 CSGI <small>Consorzio Interuniversitario per lo Sviluppo dei Sistemi a Grande Interfase Center for Colloid and Surface Science</small>	deffner & Johann
NANORESTORE PLUS ETHANOL 5 : Art. Nr.:2091 000	
<p align="center">MATERIAL SAFETY DATA SHEET In accordance with Regulation (EC) 1907/2006 and Regulation 830/2015</p>	

Safety Data Sheet dated 12/02/2016

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

- 1.1. Product identifier
Mixture identification:
Trade name: **NANORESTORE PLUS ETHANOL 5**
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
Product for the conservation of cultural heritage

Details of the supplier of the safety data sheet

Deffner & Johann GmbH
Mühläckerstr. 13
97520 Rödthlein
Germany
Tel.+49-(0)9723-93500



- 1.3. Emergency telephone number
Tel.:+49-(0)9723-93500 (call during office hours)

E-mail TC: info@deffner-johann.de

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

-  Danger, Flam. Liq. 2, Highly flammable liquid and vapour.
-  Warning, Eye Irrit. 2, Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

- 2.2. Label elements

Symbols:



Danger

Hazard Statements:

- H225 Highly flammable liquid and vapour.
- H319 Causes serious eye irritation.

Precautionary Statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P233 Keep container tightly closed.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P337+P313 If eye irritation persists: Get medical advice/attention. P370+P378

In case of fire: Use CO₂, foam, chemical powder for flammable liquids to extinguish.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.


3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and corresponding classification:

>= 75% ethanol

603-002-00-5, CAS: 64-17-5, EC: 200-578-6


F; R11; substance with a Community workplace exposure limit

 2.6/2 Flam. Liq. 2 H225

>= 1% - < 2.5% Calcium Hydroxide

CAS: 1305-62-0, EC: 215-137-3

Xi; R37/38-41

 3.2/2 Skin Irrit. 2 H315

 3.3/1 Eye Dam. 1 H318

 3.8/3 STOT SE 3 H335

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

None

- 4.3. Indication of any immediate medical attention and special treatment needed
Treatment:
None

SECTION 5: Firefighting measures

- 5.1. Extinguishing media
Suitable extinguishing media:
CO2 or Dry chemical fire extinguisher.
Extinguishing media which must not be used for safety reasons:
None in particular.
- 5.2. Special hazards arising from the substance or mixture
Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
- 5.3. Advice for firefighters
Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under point 7 and 8.
- 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
Wash with plenty of water.
- 6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contaminated clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
Always keep the containers tightly closed.
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol - CAS: 64-17-5

TLV TWA - ppm 1000 A4

TLV STEL - A4

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour: Milky liquid

Odour: Characteristic

Odour threshold: N.A.

pH: 11

Melting point / freezing point: N.A.

Initial boiling point and boiling range: 78 °C

Solid/gas flammability: N.A.

Upper/lower flammability or explosive limits: 3.5 Vol % - 15.0 Vol %

Vapour density: N.A.

Flash point: 13 °C

Evaporation rate: N.A.

Vapour pressure: 59 hPa

Density: 0.79 g/cm³

Solubility in water: Fully miscible

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): -0.35 log POW

Ignition temperature: 425 °C

Decomposition temperature: N.A.

Viscosity: 1.2 mPas

Explosive properties: *Product is not explosive. However, formation of explosive air/vapour mixtures are possible.*

Oxidizing properties: N.A.

9.2. Other information

Miscibility: N.A.

Fat Solubility: N.A.
Conductivity: N.A.
Substance Groups relevant properties N.A.

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
Avoid contact with combustible materials. The product could catch fire.
- 10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects

ethanol - CAS: 64-17-5
LD50 (RABBIT) ORAL: 6300 MG/KG
LD50 (RAT) ORAL SINGLE DOSE: 7060 MG/KG

SECTION 12: Ecological information

- 12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
N.A.
- 12.2. Persistence and degradability
None
N.A.
- 12.3. Bioaccumulative potential
N.A.
- 12.4. Mobility in soil
N.A.
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects
None

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

- 14.1. UN number
ADR- ONU: 1170
- 14.2. UN proper shipping name
ADR-Shipping Name: ETHANOL
- 14.3. Transport hazard class(es)
FLAMMABLE
- 14.4. Packing group
II
- 14.5. Environmental hazards
N.A.
- 14.6. Special precautions for user
N.A.
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Environmental Pollutant:
No

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Dir. 2006/8/EC
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 453/2010 (Annex I)
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
Restrictions related to the product:
Restriction 3
Restriction 40
Restrictions related to the substances contained:
No restriction.
- Where applicable, refer to the following regulatory provisions :
Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.
Regulation (EC) nr 648/2004 (detergents).
- 15.2. Chemical safety assessment
No

SECTION 16: Other information

- Text of phrases referred to under heading 3:
R11 Highly flammable.
R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold

CCNL - Appendix 1

Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.