

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2020

Reviewed on 05/15/2020

* 1 Identification

- **Product identifier**
- **Trade name:** Lanadol Avant
- **Article number:** 2204
- **Application of the substance / the mixture**
Colour and fibre-protecting special fat dissolver for extremely dirty textiles. For direct application prior to wetcleaning processes using the LANADOL procedure.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
- **Manufacturer:**
Chemische Fabrik Kreussler & Co. GmbH
Postfach 120454
D-65082 Wiesbaden
- **Supplier:**
Kreussler Inc., 6103 Johns Road Suit 7, Tampa, FL 33634,
Phone 813-884-1499, Fax 813-884-1599,
Internet: www.kreussler.com, e-mail: office-tampa@kreussler.com
- **Information department:**
Department T-PS
+49 (0) 611 9271-0
msds-tc@kreussler.com
- **Emergency telephone number:** +49 (0) 611 9271-0

* 2 Hazard(s) identification

- **Classification of the substance or mixture**
Eye Dam. 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
Causes serious eye damage.
- **Precautionary statements**
Wear protective gloves / eye protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *3
Fire = 0
Reactivity = 0

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Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

* 3 Composition/information on ingredients

Chemical characterization: Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

69011-36-5	Alcohols, C13 branched, ethoxylated Eye Dam. 1, H318; Aquatic Chronic 3, H412	5-15%
69011-36-5	alcohols C13 branched, ethoxylated Eye Dam. 1, H318; Acute Tox. 4, H302	5-15%
112-34-5	2-(2-butoxyethoxy)ethanol Eye Irrit. 2A, H319	5-15%
3811-73-2	pyridine-2-thiol 1-oxide, sodium salt Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=100); Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H332	≤0.1%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

Description of first aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Rinse with warm water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

* 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Use normal protective clothing.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

112-34-5	2-(2-butoxyethoxy)ethanol	30 ppm
7757-82-6	sodium sulphate	9.8 mg/m ³

- **PAC-2:**

112-34-5	2-(2-butoxyethoxy)ethanol	33 ppm
7757-82-6	sodium sulphate	110 mg/m ³

- **PAC-3:**

112-34-5	2-(2-butoxyethoxy)ethanol	200 ppm
7757-82-6	sodium sulphate	650 mg/m ³

* 7 Handling and storage

- **Handling:**

- **Precautions for safe handling** No special measures required.

- **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:** Keep receptacle tightly sealed.

- **Storage class:** 12

- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

112-34-5 2-(2-butoxyethoxy)ethanol (5-15%)

TLV	Long-term value: 67.5* mg/m ³ , 10* ppm *Inhalable fraction and vapor
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- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.

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· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

PVC or PE gloves

Recommended thickness of the material: ≥ 0.4 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Not suitable are gloves made of the following materials:

Leather gloves

Strong gloves

· Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

* 9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:

Fluid

Color:

Colorless

· Odor:

Characteristic

· Odor threshold:

Not determined.

· pH-value at 20 °C (68 °F):

7

· Change in condition

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

Undetermined.

· Flash point:

Not applicable.

· Flammability (solid, gaseous):

Not applicable.

· Decomposition temperature:

Not determined.

· Auto igniting:

Product is not selfigniting.

· Danger of explosion:

Product does not present an explosion hazard.

· Explosion limits:

Lower:

Not determined.

Upper:

Not determined.

· Vapor pressure:

Not determined.

· Density at 20 °C (68 °F):

1.02 g/cm³ (8.51 lbs/gal)

· Relative density

Not determined.

· Vapor density

Not determined.

· Evaporation rate

Not determined.

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· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C (68 °F):	16 s (DIN 53211/4)
· Solvent content:	
Organic solvents:	0.0 %
VOC (US)	0.0 g/l / 0.00 lb/gl
· Other information	No further relevant information available.

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

* 11 Toxicological information

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

· LD/LC50 values that are relevant for classification:			
ATE (Acute Toxicity Estimate)			
Oral	LD-50	4,990-15,293 mg/kg (rat)	
Dermal	LD-50	39,130 mg/kg (bunny)	

69011-36-5 Alcohols, C13 branched, ethoxylated		
Oral	LD-50	>5,000 mg/kg (rat)
69011-36-5 alcohols C13 branched, ethoxylated		
Oral	LD-50	500-2,000 mg/kg (rat)
112-34-5 2-(2-butoxyethoxy)ethanol		
Oral	LD-50	3,384 mg/kg (rat)
Dermal	LD-50	2,700 mg/kg (bunny)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
· NTP (National Toxicology Program)
None of the ingredients is listed.

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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

* 12 Ecological information

· Toxicity

· Aquatic toxicity:

69011-36-5 Alcohols, C13 branched, ethoxylated

EC-10 (17 h) >2,500 mg/l (Belechtschlamm) (DIN 38412 Teil 8)

EC-50 48h 1-10 mg/l (Daphnia magna)

LC-50 96h 1-10 mg/l (Leuciscus idus) (DIN 38412 Teil 15)

69011-36-5 alcohols C13 branched, ethoxylated

LC-50 96h 1-10 mg/l (Leuciscus idus)

112-34-5 2-(2-butoxyethoxy)ethanol

EC-10 (17 h) 1,170 mg/l (Pseudomonas putida)

EC-50 24h 2,850 mg/l (Daphnia magna)

LC-50 96h 1,300 mg/l (Lepomis macrochirus)

NOEC (96h) >100 mg/l (Desmodesmus subspicatus)

3811-73-2 pyridine-2-thiol 1-oxide, sodium salt

EC-50 48h 0.022 mg/l (Daphnia magna) (OECD 202)

EC-50 96h 0.00767 mg/l (Oncorhynchus mykiss) (OECD 203)

EC-50 72h 0.46 mg/l (Selenastrum capricornutum) (OECD 201)

NOEC (72 h) 0.08 mg/l (Selenastrum capricornutum) (OECD 201)

· **Persistence and degradability** No further relevant information available.· **Other information:** The product is easily biodegradable.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:**

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Do not allow product to reach ground water, water course or sewage system.

The product may not be released into the environment without control.

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**· **Recommendation:** Dispose of in accordance with local, state, and federal Regulations.· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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* 14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

* 15 Regulatory information

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

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

112-34-5 | 2-(2-butoxyethoxy)ethanol

· TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· New Jersey Right-to-Know List:

None of the ingredients is listed.

· Pennsylvania Right-to-Know List:

7757-82-6 | sodium sulphate

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

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· TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.
· MAK (German Maximum Workplace Concentration)
None of the ingredients is listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.
· Canadien Substances Listings:
· Canadien Domestic Substances List (DSL):
All ingredients are listed.
· Canadien Ingredient disclosure list (limit 0.1%)
All ingredients are listed.
· Canadien Ingredient disclosure list (limit 1%)
112-34-5 2-(2-butoxyethoxy)ethanol
· GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).
· Hazard pictograms



GHS05

- **Signal word** Danger
- **Hazard statements**
Causes serious eye damage.
- **Precautionary statements**
Wear protective gloves / eye protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The information of Items 4 through 8 and 10 through 12 partially refers not to the use and the proper application of the product (see Directions for Use/Product Information) but to the release of larger quantities in the case of accidents and irregularities.

The information exclusively describes the safety requirements of the product(s) and is based on the present state of our experience.

Non-ionic tensides can have varying characteristics and classifications despite same CAS-No.

- **Department issuing SDS:**
Department T-PS
Herr Heiko Schmidt
+49 (0) 611/9271-0
- **Contact:** Herr Heiko Schmidt
- **Date of preparation / last revision** 05/15/2020 / 16
- **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)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
* **Data compared to the previous version altered.**

US
