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

1.1. Product identifier

Polystar® Plus

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

Use of the substance/mixture

Cleaner Concentrate

Uses advised against

Reserved for industrial and professional use.

1.3. Details of the supplier of the safety data sheet

Company name:	Polytop GmbH	
Street:	Schafweide 2	
Place:	D-63762 Großostheim	
Telephone:	+49 (0) 6026 99577-0	Telefax: +49 (0) 6026 99577-56
e-mail:	info@polytop.de	
Contact person:	Zentrale	
Internet:	www.polytop.de www.polytop-shop.de	
Responsible Department:	Tel. +49 (0) 6026 99577-0 mo-th 08:00 - 16:30 o'clock, fr 08:00 - 14:30 o'clock (research and development)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Hazard Statements:
Causes skin irritation.
Causes serious eye irritation.

The mixture need not be classified as corrosive in spite of the extreme pH.
In vitro skin test OECD 431 (+ Regulation (EC) No. 440/2008, Annex, B.40bis): not corrosive

According to Directive 1999/45/EC or Appendix VI to Directive 67/548/EEC the preparation requires no special labelling.
There is no obligatory labelling requirement according to the Directive covering preparations 1999/45/EC.
Product is classified and labelled in accordance with EC regulation 1272/2008/EU (CLP/GHS).

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Warning

Pictograms:

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves and eye/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

see below Labelling for contents according to regulation (EC) No. 648/2004, Complexing agent (GLDA), Dyestuff.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
68439-46-3	Alcohols, C9-11 ethoxylated			1-5 %
	#			
	Eye Dam. 1; H318			
863679-20-3	Quaternary coco alkyl methyl amine ethoxylate methyl chloride			0,1-1,0 %
	#			
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1; H302 H314 H400			
5989-27-5	Limonene (perfumes)			0,01-0,1 %
			01-2119493353-35	
	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H400 H410			
78-70-6	Linalool (perfumes)			0,01-0,1 %
	201-134-4		01-2119474016-42	
	Skin Irrit. 2, Eye Irrit. 2A; H315 H319			
5392-40-5	Fragrance citral			0,01-0,1 %
	226-394-6	605-019-00-3	01-2119462829-23	
	Skin Irrit. 2, Skin Sens. 1; H315 H317			

Full text of H and EUH statements: see section 16.

Labelling for contents according to Regulation (EC) No 648/2004

< 5 % non-ionic surfactants, < 5 % cationic surfactants, < 5 % phosphonates, < 5 % amphoteric surfactants, perfumes (Limonene, Linalool, Citral).

Further Information

The surfactants contained in this mixture comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

The substance does not require registration according to Regulation (EC) No 1907/2006 [REACH]. Art.2 Abs.9 (Polymer)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, saturated clothing immediately.

After inhalation

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.
After cleaning apply high-fat content skin care cream.

After contact with eyes

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

After ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water.
Seek medical advice.
Let water be drunken in little sips (dilution effect).

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

No known symptoms to date.

4.3. Indication of any immediate medical attention and special treatment needed

Give Dimeticon (Defoamer).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product itself does not burn.
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

No special fire protection measures are necessary.

5.3. Advice for firefighters

No special fire protection measures are necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

The following must be prevented:
Eye contact.

6.2. Environmental precautions

Suitable material for diluting or neutralizing:
Water.

6.3. Methods and material for containment and cleaning up

Methods of cleaning - small amounts of spilled material: Dilute with plenty of water.
Methods of cleaning - large amounts of spilled material: Take up mechanically, placing in appropriate containers for disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid the formation of aerosol.
The following must be prevented:
Eye contact.

Advice on protection against fire and explosion

Not combustible.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store only in original container.

Hints on joint storage

No special precautionary measures are necessary.

Further information on storage conditions

Recommended storage temperature: up to °C: 30

7.3. Specific end use(s)

Cleaning agent, alkaline

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
1310-58-3	Potassium hydroxide	-	2		STEL (15 min)	WEL

8.2. Exposure controls

Protective and hygiene measures

Avoid contact with eyes.
Wash hands before breaks and after work.

Eye/face protection

Tightly sealed safety glasses.

Hand protection

Suitable material: / penetration time (maximum wearing period): / Thickness of the glove material:
PVC (polyvinyl chloride) / >=8h / 0,5mm
Butyl caoutchouc (butyl rubber) / >=8h / 0,5mm
CR (polychloroprenes, Chloroprene rubber). / >=8h / 0,5mm
NBR (Nitrile rubber) / >=8h / 0,35mm
FKM (fluoro rubber) / >=8h / 0,4mm

Skin protection

Body protection: not required.

Respiratory protection

Avoid the formation of aerosol.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	green clear
Odour:	fruity

		Test method
pH-Value (at 20 °C):	12,0-12,5	

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	102 °C
Flash point:	not applicable

Flammability

Solid:	not determined
Gas:	not determined

Explosive properties
not Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not applicable

Auto-ignition temperature

Solid:	not determined
Gas:	not determined
Decomposition temperature:	not determined

Oxidizing properties
not oxidizing.

Vapour pressure: (at 20 °C)	23 hPa
Density (at 20 °C):	1,07 g/cm³
Water solubility:	miscible.

Solubility in other solvents
not determined

Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	0%

9.2. Other information

Not combustible.

SECTION 10: Stability and reactivity

10.1. Reactivity

No risks worthy of mention.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No risks worthy of mention.

10.4. Conditions to avoid

No risks worthy of mention.

10.5. Incompatible materials

acid, concentrated.

10.6. Hazardous decomposition products

No risks worthy of mention.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68439-46-3	Alcohols, C9-11 ethoxylated				
	oral	LD50 >2000 mg/kg	Rat		
863679-20-3	Quaternary coco alkyl methyl amine ethoxylate methyl chloride				
	oral	LD50 >300<2000 mg/kg			

Irritation and corrosivity

The mixture need not be classified as corrosive in spite of the extreme pH.
In vitro skin test OECD 431: not corrosive
Test was carried out with a similar formulation.
Causes serious eye irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience

Other observations

Has de-greasing effect on the skin.
After cleaning apply high-fat content skin care cream.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
68439-46-3	Alcohols, C9-11 ethoxylated					
	Acute fish toxicity	LC50 2,4 mg/l	96 h			
	Acute algae toxicity	ErC50 4,5 mg/l				
	Acute crustacea toxicity	EC50 1-10 mg/l	48 h			
863679-20-3	Quaternary coco alkyl methyl amine ethoxylate methyl chloride					
	Acute algae toxicity	ErC50 >0,1<1 mg/l	72 h			
	Acute crustacea toxicity	EC50 >0,1<1 mg/l	48 h			

12.2. Persistence and degradability

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68439-46-3	Alcohols, C9-11 ethoxylated	2,4
863679-20-3	Quaternary coco alkyl methyl amine ethoxylate methyl chloride	2,4

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

due to the alkaline character of the product, usually, it has to be neutralized before contaminated effluents are introduced into the waste water treatment system.

Further information

Technically correct releases of minimal concentrations to adapted biological sewage treatment facility , will not disturb the biodegradability of activated sludge.
Chemical Oyxgen Demand (COD) [mg O2/g Produkt]: 280

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

List of Wastes Code - residues/unused products

200130 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents other than those mentioned in 20 01 29

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Water.
Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".
Consult supplier about waste disposal.
Cleaned containers may be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: No dangerous good in sense of these transport regulations.

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)

14.1. UN number: No dangerous good in sense of these transport regulations.

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Marine transport (IMDG)

14.1. UN number: No dangerous good in sense of these transport regulations.

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: No dangerous good in sense of these transport regulations.

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No special measures are necessary.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

2004/42/EC (VOC): Volatile organic compounds (VOC) in percentage by weight: <0,2

Additional information

Regulation (EC) No. 648/2004 (Detergents regulation):
Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not applicable
not applicable
This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none
This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

Additional information

Observe in addition any national regulations!

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
Limonene (perfumes)
Linalool (perfumes)
Fragrance citral

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,3,8,11,13,15.

Abbreviations and acronyms

2003/15/EG: contains a list of allergenic fragrance substances
648/2004 (EG): Detergents Regulation
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
TLV: Threshold Limiting Value (is a level to which it is believed a worker can be exposed day after day for a working lifetime without adverse effects)
ATEmix: Acute Toxicity Estimates of a mixture
CAS: Chemical Abstracts Service (subdivision of the American Chemical Society)
CAS no: a unique numerical identifier assigned by Chemical Abstracts Service to every chemical substance (rarely a group of substances), described in the open scientific literature
CLP, 1272/2008 (EC): Regulation of the european parliament on Classification, Labelling and Packaging of Substances and Mixtures
COD: chemical oxygen demand
DNEL: Derived No Effect Level

EC50: half maximal effective concentration (toxicity value), effect on 50% of the test population
EC: European Community
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
EN: European Standards
ErC50: median inhibitory concentration of growth rate (algal inhibition test), effect on 50% of the test population
EUH-phrase (-Code): precautionary statement (EC-specified, not derived from GHS)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals (of the United nations)
hPa: Hectopascal (1000 hPa= 1bar)
H-phrase (-Code): hazardous statement
IATA: International Air Transport Association
IBC-Code: The IBC Code provides an international standard for the safe carriage in bulk by sea of dangerous chemicals
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization
IUCLID: International Uniform ChemicaL Information Database
LC50: median lethal (killing) concentraion (toxicity value), effect on 50% of the test population
LD50: median lethal (killing) dose, effect on 50% of the test population
log Kow: partition-coefficient between octanol and water (measures how hydrophilic or hydrophobic a chemical substance is)
MARPOL: Maritime Pollution Convention
OECD: Organisation for Economic Co-operation and Development
OECD 301 (A-F: methods for determination of biodegradibility
PBT: persistent, bioacculumative and toxic (substances that have high resistance to degradation from abiotic and biotic factors, high mobility in the environment and high toxicity)
PNEC: Predicted No Effect Concentration
ppm: parts per million, 10000ppm=1%
P-phrase (-Code): precautionary statement
REACH, 1907/2006 (EC): Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulation concerning the Carriage of Dangerous Goods by Rail (
STOT RE: Specific Target Organ Toxicity (repeated exposure)
STOT SE: Specific Target Organ Toxicity (single exposure)
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative (s.PBT)

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)