Safety Data Sheet
Flare - Maximum Headlight Polisher

Safety Data Sheet dated 7/10/2024, version 23

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

1.1. Product identifier

Mixture identification:

Trade name: Flare - Maximum Headlight Polisher

Trade code: 8099

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

Recommended use:

Polish and protective treatment for dashboards and plastic parts

Uses advised against:

Strictly adhere to the recommended uses.

1.3. Details of the supplier of the safety data sheet

Supplier:

Arexons S.p.A.

via Antica di Cassano, 23, 20063

Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Competent person responsible for the safety data sheet:

arexons@arexons.it

1.4. Emergency telephone number

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

In Ireland: emergency number 112

In South Africa: Poison Information Helpline 0861 555 777

In Malta: emergency number 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

Warning, Skin Irrit. 2, Causes skin irritation.

Warning, Eye Irrit. 2, Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Warning

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves and eye/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Special Provisions:
None

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards
No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

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 the CLP regulation and related classification:

stta	Name	Ident. Number		Classification
>= 12,5% - < 15%	Idrocarburi C12-16 isoalcani ciclici <2% aromatici	EC: REACH No.:	927-676-8 01-2119456377-30	3.10/1 Asp. Tox. 1 H304 EUH066
>= 5% - < 7%	Idrocarburi C11-13 isoalcani <2%aromatici	EC: REACH No.:	920-901-0 01-2119456810-40	3.10/1 Asp. Tox. 1 H304 EUH066
>= 1% - < 2%	2-aminoethanol; ethanolamine	Index number: CAS: EC: REACH No.:	603-030-00-8 141-43-5 205-483-3 01-2119486455-28	3.2/1B Skin Corr. 1B H314 3.3/1 Eye Dam. 1 H318 3.1/4/Oral Acute Tox. 4 H302 3.1/4/Dermal Acute Tox. 4 H312 3.1/4/Inhal Acute Tox. 4 H332 3.8/3 STOT SE 3 H335 4.1/C3 Aquatic Chronic 3 H412 Specific Concentration Limits: C >= 5%: STOT SE 3 H335
>= 0,1% - < 0,25%	Ossidi di alluminio	CAS: EC:	1344-28-1 215-691-6	The product is not classified as hazardous according to Regulation EC 1272/2008 (CLP).
>= 0,1% - < 0,25%	Polyacrylic acid.			Substance with a Union workplace exposure limit.
2 ppm	cyclohexane	Index number: CAS: EC: REACH No.:	601-017-00-1 110-82-7 203-806-2 01-2119463273-41	3.10/1 Asp. Tox. 1 H304 3.8/3 STOT SE 3 H336 4.1/A1 Aquatic Acute 1 H400 4.1/C1 Aquatic Chronic 1 H410 2.6/2 Flam. Liq. 2 H225 3.2/2 Skin Irrit. 2 H315

Substances in nanoform:
>= 0,1% - < 0,25% Ossidi di alluminio
CAS: 1344-28-1, EC: 215-691-6

Nanoform characteristics	Value
Particle size distribution:	D50: 25 nm

SECTION 4: First aid measures

4.1. Description of first aid measures
In case of skin contact:
Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.
In case of eyes contact:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.
Protect uninjured eye.
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
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment:
None

SECTION 5: Firefighting measures

5.1. Extinguishing media
Appropriate Extinguishing Media:
To carbon dioxide.
To dust.
Foam
Water spray.
Not Recommended Extinguishing Media:
Do not use direct water jets.
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
Normal fire-fighting clothing, such as an open-circuit compressed air breathing apparatus (EN 137), flame-resistant suit (EN469), flame-resistant gloves (EN 659) and firefighter's boots (HO A29 or A30).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
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
For cleaning up:
Avoid flame and/or spark near leak and produced waste. Do not smoke. In case of large spills dike,
absorb and shovel up into suitable containers for disposal. Contain small spills with absorbent material.
Put dirty material in suitable container. Dispose of dirty material in accordance with local or national
regulations.
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.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
7.2. Conditions for safe storage, including any incompatibilities
Only store in the original container.
Keep away from food, drink and feed.
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
2-aminoethanol; ethanolamine - CAS: 141-43-5
20101.11 - TWA: 7.6 mg/m3, 3 ppm
EU - TWA(8h): 2.5 mg/m3, 1 ppm - STEL: 7.6 mg/m3, 3 ppm - Notes: Skin
ACGIH - TWA(8h): 3 ppm - STEL: 6 ppm - Notes: Eye and skin irr
Ossidi di alluminio - CAS: 1344-28-1
ACGIH - TWA(8h): 1 mg/m3
Polyacrylic acid.
EU - TWA: 0.05 mg/m3
cyclohexane - CAS: 110-82-7
EU - TWA(8h): 700 mg/m3, 200 ppm
ACGIH - TWA(8h): 100 ppm - Notes: CNS impair
20101.08 - TWA: 50000 ppm - Notes: ACGIH 2023
DNEL Exposure Limit Values
2-aminoethanol; ethanolamine - CAS: 141-43-5

Consumer: 3.75 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects
Worker Professional: 0.51 mg/m3 - Consumer: 0.18 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects
Worker Professional: 3 mg/kg - Consumer: 1.5 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

2-aminoethanol; ethanolamine - CAS: 141-43-5

Target: Fresh Water - Value: 0.07 mg/l
Target: Marine water - Value: 0.007 mg/l
Target: Freshwater sediments - Value: 0.357 mg/kg
Target: Marine water sediments - Value: 0.0357 mg/kg
Target: 09 - Value: 100 mg/l

8.2. Exposure controls

Eye protection:
Eye glasses with side protection.
Compliant with EN 166

Protection for skin:
protective clothing

Protection for hands:
Nitrile or Viton gloves.
Compliant with EN 374.
Thickness: Cuff 0.10 mm; Palm 0.12 mm; Fingers 0.145 mm

Respiratory protection:
Use a suitable respiratory protection device.

Thermal Hazards:
None

Environmental exposure controls:
None

Appropriate engineering controls:
None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Solid	--	--
Colour:	White	--	--
Odour:	Characteristic	--	--
Melting point/freezing point:	N.A.	--	--
Boiling point or initial boiling point and boiling range:	N.A.	--	--
Flammability:	N.A.	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	>78°C	IP 170	--
Auto-ignition temperature:	N.A.	--	--

Decomposition temperature:	N.A.	--	--
pH:	N.A.	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	N.A.	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	1,27 g/cm3	08	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--
Nanoforms:	See Nanoform information in Section 3.	--	--
9.2. Other information No other relevant information Viscosity:	>20000	Brookfield (G5 v10)	--

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable under normal conditions
10.2. Chemical stability
Stable at normal ambient temperatures and when used as recommended.
10.3. Possibility of hazardous reactions
None
10.4. Conditions to avoid
Stable under normal conditions.
10.5. Incompatible materials
None in particular.
10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Toxicological information of the product:
FLARE Rinnova Fanali Car Care Pro g 150
a) acute toxicity
Not classified
Based on available data, the classification criteria are not met

b) skin corrosion/irritation
The product is classified: Skin Irrit. 2 H315
c) serious eye damage/irritation
The product is classified: Eye Irrit. 2 H319
d) respiratory or skin sensitisation
Not classified
Based on available data, the classification criteria are not met
e) germ cell mutagenicity
Not classified
Based on available data, the classification criteria are not met
f) carcinogenicity
Not classified
Based on available data, the classification criteria are not met
g) reproductive toxicity
Not classified
Based on available data, the classification criteria are not met
h) STOT-single exposure
Not classified
Based on available data, the classification criteria are not met
i) STOT-repeated exposure
Not classified
Based on available data, the classification criteria are not met
j) aspiration hazard
Not classified
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:
2-aminoethanol; ethanolamine - CAS: 141-43-5
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 1089 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit = 2504 mg/kg
Test: LC50 - Route: Inhalation - Species: Rat > 1.3 mg/l - Duration: 4h
b) skin corrosion/irritation:
Test: Eye Corrosive Positive - Notes: due to physical-chemical data (pH = 13)
Test: Skin Corrosive Positive - Notes: due to physical-chemical data (pH = 13)

11.2. Information on other hazards
Endocrine disrupting properties:
No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
2-aminoethanol; ethanolamine - CAS: 141-43-5
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 349 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia = 27.04 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae = 2.8 mg/l - Duration h: 2.8
cyclohexane - CAS: 110-82-7
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 4.5 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia = 0.9 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae = 9.317 mg/l - Duration h: 72

12.2. Persistence and degradability
None
2-aminoethanol; ethanolamine - CAS: 141-43-5
Biodegradability: Readily biodegradable - Test: BIOGDG14 - Duration: 21GG - %: 91
cyclohexane - CAS: 110-82-7

Biodegradability: Readily biodegradable - Test: BIOGDG10 - Duration: 28gg - %: 77

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. Endocrine disrupting properties
No endocrine disruptor substances present in concentration >= 0.1%
12.7. Other adverse effects
None

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.
Additional disposal information:
"Use in accordance with good working practices, avoiding dispersal in the environment.
Do not discharge into drains, ground water or water courses. Comply with current legislation on the protection of water and soil from pollution (Legislative Decree No. 152 of 3/4/2006).
Dispose of used product and containers by handing them over to authorised companies, in accordance with the provisions of
Legislative Decree No. 152/2006 (Consolidated Environmental Act, which replaced the Ronchi Decree) as amended.
The used product is to be considered special waste to be classified in accordance with Directive No. 2008/98/EC on waste and related matters. Recover if possible. Send to authorised disposal plants or incineration under
controlled conditions (152/2006 art. 184).
Act in accordance with the local and national laws in force.
Contaminated packaging must be emptied as far as possible. After cleaning, send to an authorised centre for recycling or disposal."

SECTION 14: Transport information

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.
14.2. UN proper shipping name
N.A.
14.3. Transport hazard class(es)
N.A.
14.4. Packing group
N.A.
14.5. Environmental hazards
ADR-Enviromental Pollutant: No
IMDG-Marine pollutant: No
14.6. Special precautions for user
N.A.
14.7. Maritime transport in bulk according to IMO instruments
N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)
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. 2020/878
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)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 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:

No restriction.

Restrictions related to the substances contained:

Restriction 40
Restriction 57
Restriction 75

Volatile Organic compounds - VOCs = 1.88 %
Volatile Organic compounds - VOCs = 18.81 g/Kg
Volatile Organic compounds - VOCs = 23.89 g/l

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

2-aminoethanol; ethanolamine

SECTION 16: Other information

Text of phrases referred to under heading 3:

H304 May be fatal if swallowed and enters airways.
EUH066 Repeated exposure may cause skin dryness or cracking.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.

H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Paragraphs modified from the previous revision:

SECTION 9: Physical and chemical properties

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method

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

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.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
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.
NA:	Not applicable
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.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.

Exposure Scenario, 10/07/2019

Substance identity	
Chemical name	2-Aminoetanolo
CAS No.	141-43-5
EINECS No.	205-483-3

Table of contents

1. ES 1 Consumer use; Washing and cleaning products (PC35)

1.1 TITLE SECTION

Exposure Scenario name	Consumer goods
Date - Version	10/07/2019 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Washing and cleaning products (PC35)

Environment Contributing Scenario

CS1 Water-based process	ERC8d

Consumer Contributing Scenario

CS2 Detergent liquids	PC35

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario: Water-based process (ERC8d)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual amount per site 60000000 kg

Release type: Continuous release

Emission days: 365 days per year

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Contain and dispose of waste according to local regulations.	Waste - minimum efficiency of: 87 %

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 18000 m³/day
Covers indoor and outdoor use

1.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC35)

Product Categories	Washing and cleaning products (PC35)

Product (article) characteristics

Vapour pressure:

0.539 hPa

Concentration of substance in product:

Covers concentrations up to 5 %

Amount used, frequency and duration of use/exposure

Duration:

Application duration 0.3 min

Frequency:

Covers exposure up to 365 days per year

Duration:

Exposure duration 0.75 min

Information and behavioural advice for consumers

Information and behavioural advice for consumers:

Avoid contact with eyes

Other conditions affecting consumers exposure

Room size: Covers use in room size of 1 m³

Ventilation rate: Covers use under typical household ventilation.

Body parts exposed:

Palm of one hand Hands and forearms

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario: Water-based process (ERC8d)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	9.6 kg/d	ECETOC TRA environment v2.0	0.514

1.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.01 mg/m³	N/A	0.01
inhalative, systemic, short-term	0.01 mg/m³	N/A	0.01
dermal, systemic, long-term	0.008 mg/kg KW	N/A	0.03
dermal, systemic, long-term	0.002 mg/kg KW	N/A	0.01
oral, systemic, long-term	0.002 mg/kg KW	N/A	0.01

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

2. ES 2 Widespread use by professional workers; Washing and cleaning products (PC35)

2.1 TITLE SECTION

Exposure Scenario name	Cleaning agent
Date - Version	10/07/2019 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Washing and cleaning products (PC35)

Environment Contributing Scenario	
CS1 Water-based process	ERC8d
Worker Contributing Scenario	
CS2 Cleaning	PROC3
CS3 Cleaning	PROC8a
CS4 Cleaning	PROC10
CS5 Cleaning	PROC7 - PROC11
CS6 Cleaning	PROC13
CS7 Cleaning	PROC19

2.2 Conditions of use affecting exposure

2.2. CS1: Environment Contributing Scenario: Water-based process (ERC8d)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 10 %

Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual amount per site 65000000 kg

Release type: Continuous release

Emission days: 220 days per year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 87 %

Additional information on STP:

Acclimated biological treatment

STP sludge treatment:

STP effluent (m³/day): 2300

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Product residual disposal complies with applicable regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 1800 m³/day
Covers indoor and outdoor use

2.2. CS2: Worker Contributing Scenario: Cleaning (PROC3)

Process Categories	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

0.539 hPa

Concentration of substance in product:

Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Duration:

Covers daily exposures up to 8 hours

Frequency:

Covers use up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Ensure that direct skin contact is avoided.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable gloves tested to EN374.	Dermal - minimum efficiency of: 98 %
Wear suitable respiratory protection.	Dermal - minimum efficiency of: 90 %
Use suitable eye protection.	

Other conditions affecting worker exposure

Indoor use
Ventilation rate: Provide forced ventilation 80 %

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Ensure regular inspection, cleaning and maintenance of equipment and machines.

2.2. CS3: Worker Contributing Scenario: Cleaning (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:
0.539 hPa

Concentration of substance in product:
Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours
Frequency:
Covers use up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures
Ensure that direct skin contact is avoided.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable gloves tested to EN374.	Dermal - minimum efficiency of: 98 %
Wear suitable respiratory protection.	Dermal - minimum efficiency of: 90 %
Use suitable eye protection.	

Other conditions affecting worker exposure

Indoor use
Ventilation rate: Provide forced ventilation 80 %

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:
Ensure regular inspection, cleaning and maintenance of equipment and machines.

2.2. CS4: Worker Contributing Scenario: Cleaning (PROC10)

Process Categories	Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
0.539 hPa

Concentration of substance in product:
Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours
Frequency:
Covers use up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures
Ensure that direct skin contact is avoided.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable gloves tested to EN374.	Dermal - minimum efficiency of: 98 %
Wear suitable respiratory protection.	Dermal - minimum efficiency of: 90 %
Use suitable eye protection.	

Other conditions affecting worker exposure

Indoor use
Ventilation rate: Provide forced ventilation 80 %

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:
Ensure regular inspection, cleaning and maintenance of equipment and machines.

2.2. CS5: Worker Contributing Scenario: Cleaning (PROC7, PROC11)

Process Categories	Industrial spraying - Non industrial spraying (PROC7, PROC11)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
0.539 hPa

Concentration of substance in product:
Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours
Frequency:
Covers use up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures
Ensure that direct skin contact is avoided.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable gloves tested to EN374.	Dermal - minimum efficiency of: 98 %
Wear suitable respiratory protection.	Dermal - minimum efficiency of: 90 %
Use suitable eye protection.	

Other conditions affecting worker exposure

Indoor use
Ventilation rate: Provide forced ventilation 80 %

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:
Ensure regular inspection, cleaning and maintenance of equipment and machines.

2.2. CS6: Worker Contributing Scenario: Cleaning (PROC13)

Process Categories	Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
0.539 hPa

Concentration of substance in product:
Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours

Frequency:
Covers use up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures
Ensure that direct skin contact is avoided.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable gloves tested to EN374.	Dermal - minimum efficiency of: 98 %
Wear suitable respiratory protection.	Dermal - minimum efficiency of: 90 %
Use suitable eye protection.	

Other conditions affecting worker exposure

Indoor use
Ventilation rate: Provide forced ventilation 80 %

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:
Ensure regular inspection, cleaning and maintenance of equipment and machines.

2.2. CS7: Worker Contributing Scenario: Cleaning (PROC19)

Process Categories	Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
0.539 hPa

Concentration of substance in product:
Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Duration:
Covers daily exposures up to 8 hours

Frequency:
Covers use up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Ensure that direct skin contact is avoided.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable gloves tested to EN374.	Dermal - minimum efficiency of: 98 %
Wear suitable respiratory protection.	Dermal - minimum efficiency of: 90 %
Use suitable eye protection.	

Other conditions affecting worker exposure

Indoor use

Ventilation rate: Provide forced ventilation 80 %

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Ensure regular inspection, cleaning and maintenance of equipment and machines.

2.3 Exposure estimation and reference to its source

2.3. CS1: Environment Contributing Scenario: Water-based process (ERC8d)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	9343 kg/d	ECETOC TRA environment v2.0	0.482

2.3. CS2: Worker Contributing Scenario: Cleaning (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.01 mg/kg KW	ECETOC TRA worker v2.0	0.01
inhalative, systemic, long-term	0.15 mg/m³	ECETOC TRA worker v2.0	0.05
inhalative, systemic, short-term	0.15 mg/m³	ECETOC TRA worker v2.0	0.05

2.3. CS3: Worker Contributing Scenario: Cleaning (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.03 mg/kg KW	ECETOC TRA worker v2.0	0.03
inhalative, systemic, long-term	1.27 mg/m³	ECETOC TRA worker v2.0	0.39

2.3. CS4: Worker Contributing Scenario: Cleaning (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.05 mg/kg KW	ECETOC TRA worker v2.0	0.05

inhalative, systemic, long-term	0.76 mg/m³	ECETOC TRA worker v2.0	0.23

2.3. CS5: Worker Contributing Scenario: Cleaning (PROC7, PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.21 mg/kg KW	ECETOC TRA worker v2.0	0.21
inhalative, systemic, long-term	1.53 mg/m³	ECETOC TRA worker v2.0	0.46

2.3. CS6: Worker Contributing Scenario: Cleaning (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.03 mg/kg KW	ECETOC TRA worker v2.0	0.03
inhalative, systemic, long-term	0.25 mg/m³	ECETOC TRA worker v2.0	0.08

2.3. CS7: Worker Contributing Scenario: Cleaning (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.28 mg/kg KW	ECETOC TRA worker v2.0	0.28
inhalative, systemic, long-term	0.38 mg/m³	ECETOC TRA worker v2.0	0.12

2.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. ES 3 Use at industrial site; Polymer preparations and compounds (PC32)

3.1 TITLE SECTION

Exposure Scenario name	Additive
Date - Version	10/07/2019 - 1.0
Life Cycle Stage	Use at industrial site
Main user group	Industrial uses
Product Categories	Polymer preparations and compounds (PC32)
Environment Contributing Scenario	
CS1 Solvent-based process	ERC5
Worker Contributing Scenario	
CS2 Additive	PROC14

3.2 Conditions of use affecting exposure

3.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC5)

Environmental release categories	Use at industrial site leading to inclusion into/onto article (ERC5)

Product (article) characteristics

Concentration of substance in product:
Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use (or from service life)

Amounts used:
Annual amount per site 6720000 kg

Release type: Continuous release

Emission days: 365 days per year

Conditions and measures related to sewage treatment plant

STP type:
Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 87 %
Additional information on STP:
Biological elimination
STP sludge treatment:
No application of sewage sludge to soil
STP effluent (m³/day): 2300

Conditions and measures related to treatment of waste (including article waste)

Waste treatment
Do not apply industrial sludge to natural soils.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 18000 m³/day

3.2. CS2: Worker Contributing Scenario: Additive (PROC14)

Process Categories	Tabletting, compression, extrusion, pelletisation, granulation (PROC14)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

0.539 hPa

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to 480 min

Frequency:

Covers frequency up to: 240 days per year

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Use suitable eye protection.	
Wear suitable gloves tested to EN374.	Inhalation - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use

Ventilation rate: Provide forced ventilation 90 %

3.3 Exposure estimation and reference to its source

3.3. CS1: Environment Contributing Scenario: Solvent-based process (ERC5)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	6.28 kg/d	N/A	N/A

3.3. CS2: Worker Contributing Scenario: Additive (PROC14)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.07 mg/kg bw/day	ECETOC TRA worker v3	0.07
inhalative, systemic, long-term	1.27 mg/m³	ECETOC TRA worker v3	0.39
inhalative, local, long-term	1.27 mg/m³	ECETOC TRA worker v3	0.39

3.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.