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

1.1 Product identifier

ASTC 3003 , Part A

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

1.2.1 Relevant uses

Sealing, filling and caulking in clean rooms.

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

ASTC Polymers
3207 West Warner Ave.
Santa Ana, CA 92704 / USA
Phone +1 714.966.2893
Fax +1 714.966.9105
Homepage www.astcpolymers.com
E-mail info@astcpolymers.com

Address enquiries to

Technical information info@astcpolymers.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Company +1 714-552-6915 & +1 714-803-1274

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Carc. 2: H351 Suspected of causing cancer.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Irrit. 2: H315 Causes skin irritation.
Acute Tox. 4: H332 Harmful if inhaled.
STOT SE 3: H335 May cause respiratory irritation.
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure through inhalation.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word DANGER

Contains: 4,4'-Methylenediphenyl diisocyanate

4,4'-Methylenediphenyl diisocyanate, oligomers

Hazard statements

H351 Suspected of causing cancer.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure through inhalation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P260 Do not breathe vapours.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.
P284 In case of inadequate ventilation wear respiratory protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER / doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

Special labelling

EUH204 Contains isocyanates. May produce an allergic reaction.
Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3 Other hazards

Physico-chemical hazards Reactions with water, with formation of carbon dioxide.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
40 - <50	4,4'-Methylenediphenyl diisocyanate
	CAS: 101-68-8, EINECS/ELINCS: 202-966-0, EU-INDEX: 615-005-00-9
	GHS/CLP: Carc. 2: H351 - Acute Tox. 4: H332 - STOT RE 2: H373 - Eye Irrit. 2: H319 - STOT SE 3: H335 - Skin Irrit. 2: H315 - Resp. Sens. 1: H334 - Skin Sens. 1: H317
1 - <10	4,4'-Methylenediphenyl diisocyanate, oligomers
	CAS: 25686-28-6, EINECS/ELINCS: 500-040-3, Reg-No.: 01-2119457013-49-XXXX
	GHS/CLP: Acute Tox. 4: H332 - Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - Resp. Sens. 1: H334 - Skin Sens. 1: H317 - Carc. 2: H351 - STOT SE 3: H335 - STOT RE 2: H373

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Take off contaminated clothing and wash before reuse.
Symptoms of poisoning may not occur for many hours, therefore keep under medical supervision for at least 48 hours.

Inhalation
Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact
In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact
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.

Ingestion
Seek medical advice immediately.
Do not induce vomiting.
Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions
Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

Extinguishing media that must not be used
Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Hydrogen cyanide (HCN).
Nitrogen oxides (NOx).
Carbon monoxide (CO)
Carbon dioxide (CO2)

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Do not inhale explosion and/or combustion gases.

Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.
Use breathing apparatus if exposed to vapours/aerosol.
Keep people away and stay on the upwind side.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide suitable vacuuming at the processing area.
Avoid spilling in enclosed areas.
Avoid contact with eyes and skin. Use personal protective equipment.

Do not eat, drink, smoke or take drugs at work.
After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.
Keep only in original container.

Do not store together with oxidizing agents.
Do not store together with food and animal food/diet.

Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating.
Keep in a cool place. Store in a dry place.
Protect from atmospheric moisture and water.
Keep locked up, out of reach of children.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
4,4'-Methylenediphenyl diisocyanate
CAS: 101-68-8, EINECS/ELINCS: 202-966-0, EU-INDEX: 615-005-00-9
Long-term exposure: 0,02 mg/m³, as NCO, Sen
Short-term exposure (15-minute): 0,07 mg/m³
4,4'-Methylenediphenyl diisocyanate, oligomers
CAS: 25686-28-6, EINECS/ELINCS: 500-040-3, Reg-No.: 01-2119457013-49-XXXX
Long-term exposure: 0,02 mg/m³, as NCO, Sen
Short-term exposure (15-minute): 0,07 mg/m³

DNEL

Substance
4,4'-Methylenediphenyl diisocyanate, oligomers, CAS: 25686-28-6
Industrial, dermal, Acute - systemic effects: 50 mg/kg bw/day.
Industrial, inhalative, Long-term - local effects: 0,05 mg/m³.
Industrial, inhalative, Long-term - systemic effects: 0,05 mg/m³.
general population, oral, Acute - systemic effects: 20 mg/kg bw/day.
general population, dermal, Acute - systemic effects: 25 mg/kg bw/day.
general population, inhalative, Long-term - local effects: 0,025 mg/m³.
general population, inhalative, Long-term - systemic effects: 0,025 mg/m³.

PNEC

Substance
4,4'-Methylenediphenyl diisocyanate, oligomers, CAS: 25686-28-6
soil, 1 mg/kg.
sewage treatment plants (STP), 1 mg/l.
seawater, 0,1 mg/l.
freshwater, 1 mg/l.

8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation.
Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

Eye protection
Safety glasses. (EN 166:2001)

Hand protection
0,7 mm: Butyl rubber, >120 min (EN 374-1/-2/-3).
The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection
Light protective clothing.

Other
Avoid contact with eyes and skin.
Do not breathe vapour/spray.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection
Breathing apparatus in the event of high concentrations.
Short term: filter apparatus, combination filter B-P2. (DIN EN 14387)

Thermal hazards
none

Delimitation and monitoring of the environmental exposition
Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	yellowish
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	> 280
Flash point [°C]	> 60
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	reacts with water
Partition coefficient [n-octanol/water]	No information available.
Viscosity	300 cps
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.
Reactions with water, with formation of carbon dioxide. In closed containers rise of pressure.
Polymerized by contact with water, alcohols, amines or alkalis.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with water, with formation of carbon dioxide.
Reactions with alcohols, amines, aqueous acids and alkalies.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.
In the event of fire: See SECTION 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Substance
4,4'-Methylenediphenyl diisocyanate, CAS: 101-68-8
LD50, dermal, Rabbit: > 9000 mg/kg.
LD50, oral, Rat: > 5000 mg/kg.
LC50, inhalativ (mist), Human: > 2,24 mg/l (Lit.).
LC50, inhalative, Rat: 0,49 mg/l/4h (Lit.).
4,4'-Methylenediphenyl diisocyanate, oligomers, CAS: 25686-28-6
NOEC: < 4 mg/m³/90d (OECD 413).
NOEC: 0,2 mg/m³ (OECD 453).
LD50, dermal, Rabbit: > 9400 mg/kg.
LD50, oral, Rat (female): > 5000 mg/kg.
LC50, inhalative, Rat: 0,49 mg/l/4h.
NOAEL, Rat: 12 mg/m³ (OECD 414).

Serious eye damage/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Skin corrosion/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Respiratory or skin sensitisation
Toxicological data of complete product are not available.
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Calculation method

Specific target organ toxicity — single exposure
Toxicological data of complete product are not available.
May cause respiratory irritation.
Calculation method

Specific target organ toxicity — repeated exposure
Toxicological data of complete product are not available.
May cause damage to organs through prolonged or repeated exposure.
Calculation method

Mutagenicity
Toxicological data of complete product are not available.
Does not contain a relevant substance that meets the classification criteria.

Reproduction toxicity
Toxicological data of complete product are not available.
Does not contain a relevant substance that meets the classification criteria.

Carcinogenicity
Toxicological data of complete product are not available.
Suspected of causing cancer.
Calculation method

Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.

General remarks

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
4,4'-Methylenediphenyl diisocyanate, CAS: 101-68-8
EC50, (24h), Daphnia magna: 0,35 mg/L (Lit.).
IC50, (72h), Desmodesmus subspicatus: 1,5 mg/L (Lit.).
4,4'-Methylenediphenyl diisocyanate, oligomers, CAS: 25686-28-6
LC50, (96h), fish: > 1000 mg/l (OECD 203).
EC50, (24h), Daphnia magna: > 1000 mg/l (OECD 202).
EC50, Bacteria: > 100 mg/l/3h (OECD 209).
EC50, (72h), Algae: > 1640 mg/l (OECD 201).
NOEC, (21d), Daphnia magna: > 10 mg/l (OECD 211).

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	No information available.
Biological degradability	CAS 101-68-8: 0%, 28d (OECD 302C) CAS 25686-28-6: 0%, 28d (OECD 302C)

12.3 Bioaccumulative potential

Log Pow: 4,51 (CAS 101-68-8)
BCF: 200 (CAS 101-68-8)
Log Pow: 8,56 (CAS 25686-28-6)
BCF: 200 (CAS 25686-28-6)

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

The product is insoluble in water.
Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended) 080501*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Contaminated packing should be disposed of as product waste.

Waste no. (recommended) 150110*
150104

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2016).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (1999/13/CE)	0%

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H315 Causes skin irritation.
H335 May cause respiratory irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Carc. 2: H351 Suspected of causing cancer. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Acute Tox. 4: H332 Harmful if inhaled. (Calculation method)
STOT SE 3: H335 May cause respiratory irritation. (Calculation method)
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure through inhalation. (Calculation method)

Modified position

SECTION 2 deleted: P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 2 been added: P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER / doctor.

SECTION 2 deleted: P308+P311 IF exposed or concerned: Call a POISON CENTER / doctor /…

SECTION 2 been added: The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

SECTION 2 deleted: The product is classified and required to be labelled in accordance with EC-Directives

SECTION 2 been added: P403+P233 Store in a well-ventilated place. Keep container tightly closed.

SECTION 4 been added: Rinse mouth.

SECTION 4 been added: Take off contaminated clothing and wash before reuse.

SECTION 4 been added: Symptoms of poisoning may not occur for many hours, therefore keep under medical supervision for at least 48 hours.

SECTION 4 been added: Do not induce vomiting.

SECTION 4 deleted: Remove contaminated soaked clothing immediately and dispose of safely.

SECTION 5 been added: Carbon monoxide (CO)

SECTION 5 been added: Cool containers at risk with water spray jet.

SECTION 5 been added: Carbon dioxide (CO2)

SECTION 6 deleted: Take up residues with absorbent material (e.g. sand).

SECTION 6 been added: Take up with absorbent material (e.g. sand).

SECTION 6 deleted: Take up mechanically.

SECTION 6 been added: Use breathing apparatus if exposed to vapours/aerosol.

SECTION 6 deleted: Use personal protective clothing.

SECTION 6 been added: Wear suitable protective equipment. For personal protection see SECTION 8.

SECTION 6 been added: Keep people away and stay on the upwind side.

SECTION 7 been added: Avoid spilling in enclosed areas.

SECTION 7 been added: Avoid contact with eyes and skin. Use personal protective equipment.

SECTION 7 been added: Keep in a cool place. Store in a dry place.

SECTION 7 been added: Keep only in original container.

SECTION 8 been added: Short term: filter apparatus, combination filter B-P2. (DIN EN 14387)

SECTION 8 deleted: See SECTION 6+7.

SECTION 8 deleted: Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

SECTION 8 been added: Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

SECTION 8 been added: Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9 deleted: not applicable

SECTION 9 been added: No information available.

SECTION 10 been added: Reactions with water, with formation of carbon dioxide. In closed containers rise of pressure.

SECTION 10 been added: In the event of fire: See SECTION 5.

SECTION 10 been added: Polymerized by contact with water, alcohols, amines or alkalis.

SECTION 10 deleted: Water.

SECTION 10 been added: See SECTION 10.3.

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: Irritant

SECTION 11 deleted: not determined

SECTION 11 been added: Calculation method

SECTION 11 deleted: The product was classified on the basis of the calculation procedure of the preparation directive.

SECTION 11 deleted: Toxicological data of complete product are not available.

SECTION 11 been added: Based on the available information, the classification criteria are not fulfilled.

SECTION 11 been added: Calculation method

SECTION 11 deleted: This product contains one or more substance(s) of categorie Carc. 2 (CLP).

SECTION 11 been added: Suspected of causing cancer.

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: Does not contain a relevant substance that meets the classification criteria.

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 deleted: not determined

SECTION 11 been added: Does not contain a relevant substance that meets the classification criteria.

SECTION 11 deleted: not determined

SECTION 11 deleted: not determined

SECTION 11 been added: Irritant

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: Calculation method

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 deleted: not determined

SECTION 11 been added: May cause damage to organs through prolonged or repeated exposure.

SECTION 11 been added: May cause an allergic skin reaction.

SECTION 11 been added: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

SECTION 11 been added: Calculation method

SECTION 11 deleted: not determined

SECTION 11 been added: Toxicological data of complete product are not available.

SECTION 11 been added: May cause respiratory irritation.

SECTION 11 been added: Calculation method

SECTION 11 deleted: not determined

SECTION 11 been added: Calculation method

SECTION 12 deleted: not determined

SECTION 12 been added: No information available.

SECTION 12 been added: Ecological data of complete product are not available.

SECTION 12 been added: The product is insoluble in water.

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