Issue Date 31-Jul-2017 **Revision Date** 31-Mar-2015 **Version** 1

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

1.1. Product identifier

Product Name **NX 800**

Chemical Name	CAS No	EC No	REACH Registration Number
1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate	6846-50-0	229-934-9	01-2119451093-47-0001

Pure substance/mixture Substance

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

Industrial Manufacture of substances. Formulation and (re)packing of substances and mixtures. Distribution and storage. Use in sealants, in coatings, in inks, in construction chemicals, as a process chemical and plasticiser.

Professional Use in sealants, in coatings, in inks, in construction chemicals, plasticiser and Laboratory chemicals.

Consumer Use in sealants, in coatings, in inks, in construction chemicals, plasticiser and Cosmetics.

Uses advised against Not identified.

1.3. Details of the supplier of the safety data sheet

Company	Synthomer (UK) Limited Central Road, Templefields Harlow CM20 2BH
Telephone	+441279436211
Telefax	+441279444025
E-mail address of person responsible for the SDS	regulatoryaffairs@synthomer.com

1.4. Emergency telephone number

Emergency telephone number:	+44(0) 1235239670
National Emergency Telephone number:	Not applicable

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Chronic aquatic toxicity Category 3 - (H412)

2.2. Label elements

Symbols/Pictograms

Not applicable

Signal word

Not applicable

Hazard statements
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved waste disposal plant

Contains: 1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate

2.3. Other hazards
None known

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical Name	EC No	CAS No	REACH Registration Number	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate	229-934-9	6846-50-0	01-2119451093-47-0001	>99	Aquatic Chronic 3 (H412)

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation First aid measures not required, but get fresh air for personal comfort.

Skin contact First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Use lukewarm water if possible. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Clean mouth with water. If a large quantity has been ingested or if you feel unwell, get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed
None known

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Water spray (fog). Use CO2, dry chemical, or foam.

Unsuitable extinguishing media
High volume water jet.

5.2. Special hazards arising from the substance or mixture
Hazardous combustion products
Carbon dioxide (CO2), Carbon monoxide (CO).

5.3. Advice for firefighters
Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear safety glasses, gloves, protective clothing and rubber boots for hygienic reasons.

6.2. Environmental precautions
Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up
Methods for containment

Small spill	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal
Large spill	Pump up the product into a spare container suitably labelled.

Methods for cleaning up
Following product recovery, flush area with water. Do not allow into any sewer, on the ground or into any body of water.

6.4. Reference to other sections
See Section 7, 8, 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
No specific measures identified.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
Keep tightly closed in a dry and cool place.

7.3. Specific end use(s)
For details, see the separate exposure scenario(s).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Exposure Limits
Keep personal exposure levels below Derived No Effect Level (DNEL) and national exposure limit values (if existing).

Derived No Effect Level (DNEL) - worker

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)			
Type	Exposure route	DNEL	Remarks
Chronic effects, systemic	Inhalation	110	mg/m^3
Chronic effects, systemic	Dermal	31.2	mg/kg bw/d

Derived No Effect Level (DNEL) - Consumer

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)			
Type	Exposure route	DNEL	Remarks

Chronic effects, systemic	Inhalation	32.6	mg/m^3
Chronic effects, systemic	Dermal	18.8	mg/kg bw/d
Chronic effects, systemic	Oral	18.8	mg/kg bw/d

Predicted No Effect Concentration (PNEC)

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)		
Environmental compartment	Predicted No Effect Concentration (PNEC)	Remarks
Freshwater	0.014	mg/l
Marine water	0.0014	mg/l
Freshwater sediment	5.29	mg/kg dry weight
Marine sediment	0.529	mg/kg dry weight
Impact on Sewage Treatment	3	mg/l
Soil	1.05	mg/kg dry weight
Oral	83.3	mg/kg Food chain

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Recommendation(s): Eyewash stations, Showers.

Individual protection measures, such as personal protective equipment

Eye/face protection	No specific measures identified. Recommendation(s): Wear safety glasses with side shields (or goggles).
Hand Protection	No specific measures identified. Recommendation(s): Wear suitable gloves. Chloroprene rubber, CR. Nitrile rubber, NBR. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.
Skin and body protection	No specific measures identified. Recommendation(s): Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls

See Section 6 for more information. Further information concerning special risk management measures: see annex of this safety data sheet (exposure scenarios).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

liquid
colourless

Property	**Value**	**Remarks • Method**
Odour	Slight	
Odour threshold	No information available	
pH		No information available
Melting point / freezing point	-70 °C / -94 °F	
Boiling point / boiling range	280 °C / 536 °F	
Flash point	136 °C / 277 °F	ASTM 3278
Evaporation rate		No information available
Flammability (solid, gas)		Not applicable
Explosive limits		
Upper explosive limits		Not applicable
Lower explosive limits		Not applicable
Vapour pressure	1.5 Pa	@ 25 °C Regulation (EC) No. 440/2008, Annex, A.4
Vapour density		No information available
Relative density		No information available
Water solubility	0.9-13 mg/l	@ 25 °C

Solubility(ies)		No information available
Partition coefficient	4.91	Partition Coefficient (n-octanol/water) QSAR (Quantitative Structure-Activity Relationship)
Autoignition temperature	398 °C / 748 °F	Regulation (EC) No. 440/2008, Annex, A.15
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity	5.04 mPa s	@ 25 °C OECD Test No. 114: Viscosity of Liquids
Explosive properties		Not explosive.
Oxidising properties		Not oxidising.
Density	944 kg/m³	@ 20 °C
Bulk density		No information available

9.2. Other information
No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid
No information available.

10.5. Incompatible materials
Strong oxidising agents

10.6. Hazardous decomposition products
None under normal use conditions

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure
Inhalation. Dermal.

Symptoms related to the physical, chemical and toxicological characteristics
None known.

Numerical measures of toxicity

Acute toxicity

Product does not present an acute toxicity hazard based on known or supplied information.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 425: Acute Oral Toxicity: Up-and-Down Procedure	Rat	Oral	2000	mg/kg LD0
OECD Test No. 402: Acute Dermal Toxicity	Rabbit	Dermal	2000	mg/kg LD0

	Rat	Inhalation	>5.3	mg/l LCLo (6h)

Skin corrosion/irritation
Non-irritating to the skin.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)			
Method	Species	Exposure route	Results:
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal	Non-irritating to the skin No classification according to GHS criteria.

Serious eye damage/eye irritation
Non-irritant.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)			
Method	Species	Exposure route	Results:
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye	The substance was non-irritant No classification according to GHS criteria.

Respiratory or skin sensitisation
No sensitising effects known.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)			
Method	Species	Exposure route	Results:
(Draize test)	Human data available.	Skin	Not a skin sensitiser

Germ cell mutagenicity
Not mutagenic.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)		
Method	Species	Results:
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro	Not mutagenic
Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test)	in vitro	Not mutagenic
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Not mutagenic

Carcinogenicity
There is no indication for any carcinogenic potential since all in vitro mutagenicity studies are negative.

Reproductive toxicity
Is not considered hazardous to the reproduction.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	male Rat	Oral	276	mg/kg bw/d NOAEL
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	female Rat	Oral	359	mg/kg bw/d NOAEL

OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Oral	343	mg/kg bw/d NOAEL maternal toxicity
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Oral	343	mg/kg bw/d NOAEL developmental toxicity

STOT - single exposure Target organ effects: None known

STOT - repeated exposure Target organ effects: None known

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)				
Method	Species	Exposure route	Effective dose	Remarks
USFDA Toxicological Principles for the Safety of Food Ingredients, Redbook 2000, updated to April, 2004	male Rat	Oral	150	mg/kg bw/d NOAEL
USFDA Toxicological Principles for the Safety of Food Ingredients, Redbook 2000, updated to April, 2004	female Rat	Oral	750	mg/kg bw/d NOAEL

Aspiration hazard
No information available.

SECTION 12: Ecological information

12.1. Toxicity
Harmful to aquatic life with long lasting effects.

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)					
Method	Species	Exposure route	Effective dose	Exposure time	Remarks
OECD Test No. 203: Fish, Acute Toxicity Test	Lepomis macrochirus	Freshwater	>6	96 h	mg/l LC50 (lethal concentration)
Regulation (EC) No. 440/2008, Annex, C.2	Daphnia magna	Freshwater	>1.46	48 h	mg/l EC50 (effective concentration)
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	Freshwater	>7.49	72 h	mg/l ErC50
OECD Test No. 211: Daphnia magna Reproduction Test	Daphnia magna	Freshwater	0.7	21 days	mg/l NOEC

12.2. Persistence and degradability
Readily biodegradable, failing 10-d window

1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0)			
Method	Value	Exposure time	Results:
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	71%	28 days	Readily biodegradable, failing 10-d window

12.3. Bioaccumulative potential
Bioaccumulative potential

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate	4.49	2.69

12.4. Mobility in soil
Low mobility in soil.

Chemical Name	Log Koc
1-Isopropyl-2,2-dimethyltrimethylene diisobutyrate	3.51

12.5. Results of PBT and vPvB assessment
This substance does not meet the criteria for classification as PBT or vPvB

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste from residues/unused products
The product is classified as hazardous waste and must be disposed of as such. Incinerate at a licensed installation. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Thoroughly emptied and clean packaging may be recycled. Contaminated packaging materials must be disposed of in the same manner as the product.

Waste codes / waste designations according to EWC / AVV
Waste codes should be assigned by the user based on the application for which the product was used. Recommended Use: 16 03 05*.

SECTION 14: Transport information

ADR Road transport
14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing Group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special precautions for user None

RID Rail transport
14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing Group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special precautions for user None

IMDG Sea transport
14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing Group Not regulated
14.5 Marine pollutant Not applicable
14.6 Special precautions for user None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA Air transport	Not regulated
14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

SECTION 15: Regulatory information

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

International Regulations
Not applicable.

European Union

National regulations

Germany

Water hazard class (WGK)	slightly hazardous to water (WGK 1)

15.2. Chemical safety assessment
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H412 - Harmful to aquatic life with long lasting effects

Issue Date	31-Jul-2017
Revision Date	31-Mar-2015
Revision Note	SDS sections updated: 1, 11

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006, COMMISSION REGULATION (EU) No. 830/2015 of 20 May 2015.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 1 - Manufacture of substances
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC1 - Manufacture of substances
Specific Environmental Release Category	ESVOC SpERC 1.1.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1000 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1000 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.00001
Release fraction to wastewater from process (initial release prior to RMM)	0.0003
Release fraction to soil from process (initial release prior to RMM)	0.0001

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC1 - Manufacture of substances
Specific Environmental Release Category ESVOC SpERC 1.1.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.0123 mg/l	0.876
Marine water	0.00121 mg/l	0.862
Freshwater sediment	1.01 mg/kg wwt	0.876
Marine sediment	0.0991 mg/kg wwt	0.862
Soil	0.433 mg/kg wwt	0.467
Sewage treatment plant	0.109 mg/l	0.0363

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 2 - Formulation and (re)packing of substances and mixtures
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC2 - Formulation of preparations (mixtures)
Specific Environmental Release Category	ESVOC SpERC 2.2.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.0025
Release fraction to wastewater from process (initial release prior to RMM)	0.0002
Release fraction to soil from process (initial release prior to RMM)	0.0001

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC2 - Formulation of preparations (mixtures)
Specific Environmental Release Category ESVOC SpERC 2.2.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00937 mg/l	0.669
Marine water	0.000918 mg/l	0.656
Freshwater sediment	0.77 mg/kg wwt	0.669
Marine sediment	0.0754 mg/kg wwt	0.656
Soil	0.318 mg/kg wwt	0.344
Sewage treatment plant	0.0799 mg/l	0.0266

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 3 - Distribution and storage
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures)
Specific Environmental Release Category	ESVOC SpERC 1.1b.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.00001
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC1 - Manufacture of substances
ERC2 - Formulation of preparations (mixtures)

Specific Environmental Release Category ESVOC SpERC 1.1b.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00182 mg/l	0.13
Marine water	0.000163 mg/l	0.116
Freshwater sediment	0.15 mg/kg wwt	0.13
Marine sediment	0.0134 mg/kg wwt	0.116
Soil	0.0161 mg/kg wwt	0.0174
Sewage treatment plant	0.00399 mg/l	0.00133

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

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Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 4 - Industrial Use in sealants
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC5 - Industrial use resulting in inclusion into or onto a matrix
Specific Environmental Release Category	FEICA SPERC 5.2a.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	220
Release fraction to air from process (initial release prior to RMM)	0.2
Release fraction to wastewater from process (initial release prior to RMM)	0
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC5 - Industrial use resulting in inclusion into or onto a matrix
Specific Environmental Release Category FEICA SPERC 5.2a.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00142 mg/l	0.102
Marine water	0.000123 mg/l	0.088
Freshwater sediment	0.117 mg/kg wwt	0.102
Marine sediment	0.0101 mg/kg wwt	0.088
Soil	0.083 mg/kg wwt	0.0897
Sewage treatment plant	0 mg/l	0

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 5 - Industrial Use in coatings and in inks
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category	ESVOC SpERC 4.3a.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.45
Msafe	495 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.098
Release fraction to wastewater from process (initial release prior to RMM)	0.0007
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category ESVOC SpERC 4.3a.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.0139 mg/l	0.996
Marine water	0.00137 mg/l	0.982
Freshwater sediment	1.14 mg/kg wwt	0.996
Marine sediment	0.113 mg/kg wwt	0.982
Soil	0.518 mg/kg wwt	0.559
Sewage treatment plant	0.126 mg/l	0.0419

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 6 - Industrial Use in construction chemicals
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU19 - Building and construction work

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC5 - Industrial use resulting in inclusion into or onto a matrix
Specific Environmental Release Category	EFCC SPERC 5.1a.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	220
Release fraction to air from process (initial release prior to RMM)	0.017
Release fraction to wastewater from process (initial release prior to RMM)	0
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC5 - Industrial use resulting in inclusion into or onto a matrix
Specific Environmental Release Category EFCC SPERC 5.1a.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00142 mg/l	0.102
Marine water	0.000123 mg/l	0.088
Freshwater sediment	0.117 mg/kg wwt	0.102
Marine sediment	0.0101 mg/kg wwt	0.088
Soil	0.00726 mg/kg wwt	0.00784
Sewage treatment plant	0 mg/l	0

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the

operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 7 - Industrial Use as a process chemical
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC1 - Manufacture of substances
Specific Environmental Release Category	ESVOC SpERC 1.1.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.00001
Release fraction to wastewater from process (initial release prior to RMM)	0.0003
Release fraction to soil from process (initial release prior to RMM)	0.0001

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC1 - Manufacture of substances
Specific Environmental Release Category ESVOC SpERC 1.1.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.0133 mg/l	0.953
Marine water	0.00131 mg/l	0.939
Freshwater sediment	1.1 mg/kg wwt	0.953
Marine sediment	0.00981 mg/kg wwt	0.939
Soil	0.108 mg/kg wwt	0.514
Sewage treatment plant	0.12 mg/l	0.0399

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

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Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 8 - Industrial Use: plasticiser
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Specific Environmental Release Category	ESVOC SpERC 4.19.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	300
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.0003
Release fraction to soil from process (initial release prior to RMM)	0.0001

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

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Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category ESVOC SpERC 4.19.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.0133 mg/l	0.953
Marine water	0.00131 mg/l	0.939
Freshwater sediment	1.1 mg/kg wwt	0.953
Marine sediment	0.00981 mg/kg wwt	0.939
Soil	0.48 mg/kg wwt	0.518
Sewage treatment plant	0.12 mg/l	0.0399

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 9 - Professional Use in sealants
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
Specific Environmental Release Category	FEICA SPERC 8c.2b.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.985
Release fraction to wastewater from process (initial release prior to RMM)	0
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix

Specific Environmental Release Category FEICA SPERC 8c.2b.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0 mg/l	0
Marine water	0 mg/l	0
Freshwater sediment	0 mg/kg wwt	0
Marine sediment	0 mg/kg wwt	0
Soil	0 mg/kg wwt	0
Sewage treatment plant	0 mg/l	0

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 10 - Professional Use in coatings and in inks
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category	ESVOC SpERC 8.3b.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.985
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.005

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste
External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems
ERC8d - Wide dispersive outdoor use of processing aids in open systems

Specific Environmental Release Category ESVOC SpERC 8.3b.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00144 mg/l	0.103
Marine water	0.00227 mg/l	0.0934
Freshwater sediment	0.000131 mg/kg wwt	0.103
Marine sediment	0.0107 mg/kg wwt	0.0934
Soil	0.00087 mg/kg wwt	0.000939
Sewage treatment plant	0.000164 mg/l	0.0000547

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 11 - Professional Use in construction chemicals
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Specific Environmental Release Category	EFCC SPERC 8F.1a.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.037

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Specific Environmental Release Category EFCC SPERC 8F.1a.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00149 mg/l	0.106
Marine water	0.000153 mg/l	0.109
Freshwater sediment	0.122 mg/kg wwt	0.106
Marine sediment	0.0126 mg/kg wwt	0.109
Soil	0.00283 mg/kg wwt	0.00305
Sewage treatment plant	0.000657 mg/l	0.000219

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 12 - Professional Use: plasticiser
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems
Specific Environmental Release Category	ESVOC SpERC 8.21b.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1
Msafe	1100 tonnes/year
Remarks	Annual site tonnage

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC3 - Use in closed batch process (synthesis or formulation) PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems

Specific Environmental Release Category ESVOC SpERC 8.21b.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00144 mg/l	0.103
Marine water	0.000131 mg/l	0.0934
Freshwater sediment	0.118 mg/kg wwt	0.103
Marine sediment	0.0107 mg/kg wwt	0.0934
Soil	0.00087 mg/kg wwt	0.000939
Sewage treatment plant	0.219 mg/l	0.0000547

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 13 - Professional Use as laboratory reagent
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC9a - Wide dispersive indoor use of substances in closed systems
Specific Environmental Release Category	ESVOC SpERC 8.17.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.5
Release fraction to wastewater from process (initial release prior to RMM)	0.5
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Process category(ies)	PROC15 - Use as laboratory reagent
Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems
ERC9a - Wide dispersive indoor use of substances in closed systems

Specific Environmental Release Category ESVOC SpERC 8.17.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00224 mg/l	0.16
Marine water	0.000205 mg/l	0.146
Freshwater sediment	0.184 mg/kg wwt	0.16
Marine sediment	0.0168 mg/kg wwt	0.146
Soil	0.0328 mg/kg wwt	0.0354
Sewage treatment plant	0.00821 mg/l	0.00274

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

Not applicable.

Section 4 - Guidance to check compliance with the exposure scenario

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Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 14 - Consumer use in sealants
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU21 - Consumer uses: Private households (= general public = consumers)
Product category(ies)	PC1 - Adhesives, sealants

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
Specific Environmental Release Category	FEICA SPERC 8c.2b.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.985
Release fraction to wastewater from process (initial release prior to RMM)	0
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix

Specific Environmental Release Category FEICA SPERC 8c.2b.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0 mg/l	0
Marine water	0 mg/l	0
Freshwater sediment	0 mg/kg wwt	0
Marine sediment	0 mg/kg wwt	0
Soil	0 mg/kg wwt	0
Sewage treatment plant	0 mg/l	0

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

A quantitative risk assessment is not required for human health.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 15 - Consumer use in coatings and in inks
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU21 - Consumer uses: Private households (= general public = consumers)
Product category(ies)	PC9a - Coatings and paints, thinners, paint removers

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Specific Environmental Release Category	ESVOC SpERC 8.3c.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.985
Release fraction to wastewater from process (initial release prior to RMM)	0.1
Release fraction to soil from process (initial release prior to RMM)	0.005

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal
External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems
ERC8d - Wide dispersive outdoor use of processing aids in open systems

Specific Environmental Release Category ESVOC SpERC 8.3c.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00144 mg/l	0.103
Marine water	0.00227 mg/l	0.0934
Freshwater sediment	0.000131 mg/kg wwt	0.103
Marine sediment	0.0107 mg/kg wwt	0.0934
Soil	0.00087 mg/kg wwt	0.000939
Sewage treatment plant	0.000164 mg/l	0.0000547

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

A quantitative risk assessment is not required for human health.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the

operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 16 - Consumer use: Cosmetics
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU21 - Consumer uses: Private households (= general public = consumers)
Product category(ies)	PC39 - Cosmetics, personal care products

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems
Specific Environmental Release Category	COLIPA SPERC 8a.1.a.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	1
Release fraction to soil from process (initial release prior to RMM)	0

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems

Specific Environmental Release Category COLIPA SPERC 8a.1.a.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00387 mg/l	0.277
Marine water	0.000368 mg/l	0.263
Freshwater sediment	0.318 mg/kg wwt	0.277
Marine sediment	0.0302 mg/kg wwt	0.263
Soil	0.098 mg/kg wwt	0.106
Sewage treatment plant	0.0246 mg/l	0.00821

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

A quantitative risk assessment is not required for human health.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 17 - Consumer use in construction chemicals
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU21 - Consumer uses: Private households (= general public = consumers)
Product category(ies)	PC10 - Building and construction preparations not covered elsewhere

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
Specific Environmental Release Category	EFCC SPERC 8F.1a.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.037

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Specific Environmental Release Category EFCC SPERC 8F.1a.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00149 mg/l	0.106
Marine water	0.000153 mg/l	0.109
Freshwater sediment	0.122 mg/kg wwt	0.106
Marine sediment	0.0126 mg/kg wwt	0.109
Soil	0.00283 mg/kg wwt	0.00305
Sewage treatment plant	0.000657 mg/l	0.000219

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

A quantitative risk assessment is not required for human health.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	NX 800
Chemical Name	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
CAS No	6846-50-0
EC No	229-934-9
REACH registration number	01-2119451093-47-0001
Pure substance/mixture	Substance

Exposure scenario

Section 1 - Title

Title	ES 18 - Consumer use: plasticiser
Version	1
Product Name	NX 800
Revision Date	03-Aug-2017
Sector(s) of use	SU21 - Consumer uses: Private households (= general public = consumers)
Product category(ies)	PC10 - Building and construction preparations not covered elsewhere

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems
Specific Environmental Release Category	ESVOC SpERC 8.21b.v1
Covers concentrations up to	100%

Amounts used

Annual amount used in the EU	1100 tonnes/year
Fraction of EU tonnage used in region	0.1

Product characteristics

Physical form of product	Liquid
Remarks	hydrophobic Readily biodegradable, failing 10-d window

Other operational conditions of use affecting environmental exposure

Type	Continuous release
Emission days	365
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0.01

Conditions and measures related to municipal sewage treatment plant

Type	Municipal STP
Assumed domestic sewage treatment plant flow	2000 m3/d
Removal efficiency fraction (offsite; STP)	78.2%

Environmental factors not influenced by risk management

Local freshwater dilution factor	10
Local marine water dilution factor	100

Waste management

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations

Section 2.2 - Control of worker exposure

Control of worker exposure

Covers concentrations up to	100%
Physical form of product	Liquid
Vapour pressure	1.5 Pa
Temperature vapour pressure	25°C
Exposure duration	Avoid carrying out operation for more than 8h
Use frequency	Daily
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently
Remarks	A quantitative risk assessment is not required for human health

Section 3 - Exposure estimation

Environmental exposure

Environmental release category(ies) ERC8a - Wide dispersive indoor use of processing aids in open systems

Specific Environmental Release Category ESVOC SpERC 8.21b.v1

Calculation method Used EUSES model

Environmental compartment	predicted exposure level	Risk characterisation ratio (RCR)
Freshwater	0.00144 mg/l	0.103
Marine water	0.000131 mg/l	0.0934
Freshwater sediment	0.118 mg/kg wwt	0.103
Marine sediment	0.0107 mg/kg wwt	0.0934
Soil	0.00087 mg/kg wwt	0.000939
Sewage treatment plant	0.219 mg/l	0.0000547

Control of worker exposure

A quantitative risk assessment is not required for human health.

Control of consumer exposure

A quantitative risk assessment is not required for human health.

Section 4 - Guidance to check compliance with the exposure scenario

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

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