

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 12-12-2012 Revision date: 23-1-2020 Supersedes: 25-4-2018 Version: 1.4

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

1.1. Product identifier

Product form : Article
Product name : Ninprint
Product code : B-78500
Type of product : Aerosol
Vaporizer : Aerosol

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Amino acid reagent in a spray can

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

No additional information available

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aerosol, Category 1 H222;H229
Specific target organ toxicity — Single exposure, Category 3, Narcosis H336
Aspiration hazard, Category 1 H304
Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411
Full text of H statements : see section 16

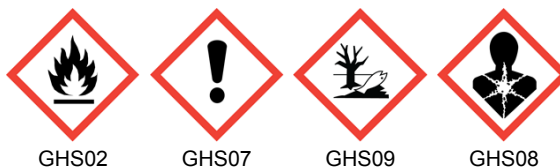
Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



CLP Signal word : Danger
Hazardous ingredients : tert-Butyl methyl ether; isopentane
Hazard statements (CLP) : H222 - Extremely flammable aerosol.
H229 - Pressurised container: May burst if heated.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.
H304 - May be fatal if swallowed and enters airways.

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P251 - Do not pierce or burn, even after use. P261 - Avoid breathing spray. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER, a doctor if you feel unwell. P391 - Collect spillage. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
isopentane	(CAS-No.) 78-78-4 (EC-No.) 201-142-8 (EC Index-No.) 601-085-00-2	30 – 40	Flam. Liq. 1, H224 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411
dimethyl ether, liquefied, under pressure	(CAS-No.) 115-10-6 (EC-No.) 204-065-8 (EC Index-No.) 603-019-00-8	20 – 30	Flam. Gas 1A, H220 Press. Gas (Liq.), H280
tert-Butyl methyl ether	(CAS-No.) 1634-04-4 (EC-No.) 216-653-1 (EC Index-No.) 603-181-00-X	5 – 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5	0 – 5	Not classified
Ninhydrine	(CAS-No.) 485-47-2 (EC-No.) 207-618-1	0 – 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Remove clothing before washing. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Take victim to an ophthalmologist if irritation persists.

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.

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

Symptoms/effects after inhalation : Slight irritation. Dry/sore throat. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the nasal mucous membranes. Coughing. Nausea. Central nervous system depression. Headache. Dizziness. Narcosis. Coordination disorders. Disturbances of consciousness. Respiratory difficulties. Disturbances of heart rate.

Symptoms/effects after skin contact : Red skin. ON CONTINUOUS EXPOSURE/CONTACT: Not irritating. Cracking of the skin.

Symptoms/effects after eye contact : Redness of the eye tissue.

Symptoms/effects after ingestion : Risk of aspiration pneumonia. Coughing. Respiratory difficulties. Nausea.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (not alcohol-resistant).

Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD: Extremely flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD: May build up electrostatic charges: risk of ignition. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

Explosion hazard : DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: Heat may cause pressure rise in tanks/drums: explosion risk. may be ignited by sparks.

Reactivity in case of fire : Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

Firefighting instructions : If no hazard for/from the surroundings: controlled burning. If hazardous substances are nearby: consider extinguishment. Extinguish only if gas supply/leak can be shut afterwards. Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

Emergency procedures : Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.

6.1.2. For emergency responders

No additional information available

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

- For containment : Plug the leak, cut off the supply. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills. Dam up the liquid spill.
- Methods for cleaning up : Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Spill must not return in its original container. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents.
- Storage area : Store at ambient temperature. Keep out of direct sunlight. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: steel. stainless steel. carbon steel. polyethylene. polypropylene. glass. Teflon. MATERIAL TO AVOID: natural rubber. butyl rubber. EPDM. polystyrene.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

tert-Butyl methyl ether (1634-04-4)	
EU - Occupational Exposure Limits	
IOELV TWA (mg/m ³)	183,5 mg/m ³
IOELV TWA (ppm)	50 ppm
IOELV STEL (mg/m ³)	367 mg/m ³
IOELV STEL (ppm)	100 ppm
Belgium - Occupational Exposure Limits	
Limit value (mg/m ³)	146 mg/m ³
Limit value (ppm)	40 ppm

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Short time value (mg/m ³)	367 mg/m ³
Short time value (ppm)	100 ppm
France - Occupational Exposure Limits	
VME (mg/m ³)	183,5 mg/m ³
VME (ppm)	50 ppm
VLE (mg/m ³)	367 mg/m ³
VLE (ppm)	100 ppm
Netherlands - Occupational Exposure Limits	
Grenswaarde TGG 8H (mg/m ³)	180 mg/m ³
Grenswaarde TGG 8H (ppm)	49 ppm
Grenswaarde TGG 15MIN (mg/m ³)	360 mg/m ³
Grenswaarde TGG 15MIN (ppm)	98 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	183,5 mg/m ³
WEL TWA (ppm)	50 ppm
WEL STEL (mg/m ³)	367 mg/m ³
WEL STEL (ppm)	100 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	50 ppm

dimethyl ether, liquefied, under pressure (115-10-6)

EU - Occupational Exposure Limits

IOELV TWA (mg/m ³)	1920 mg/m ³
IOELV TWA (ppm)	1000 ppm

Belgium - Occupational Exposure Limits

Limit value (mg/m ³)	1920 mg/m ³
Limit value (ppm)	1000 ppm

France - Occupational Exposure Limits

VME (mg/m ³)	1920 mg/m ³
VME (ppm)	1000 ppm

Netherlands - Occupational Exposure Limits

Grenswaarde TGG 8H (mg/m ³)	950 mg/m ³
Grenswaarde TGG 8H (ppm)	496 ppm
Grenswaarde TGG 15MIN (mg/m ³)	1500 mg/m ³
Grenswaarde TGG 15MIN (ppm)	783 ppm

United Kingdom - Occupational Exposure Limits

WEL TWA (mg/m ³)	766 mg/m ³
WEL TWA (ppm)	400 ppm
WEL STEL (mg/m ³)	958 mg/m ³
WEL STEL (ppm)	500 ppm

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

isopentane (78-78-4)	
EU - Occupational Exposure Limits	
IOELV TWA (mg/m ³)	3000 mg/m ³
IOELV TWA (ppm)	1000 ppm
Belgium - Occupational Exposure Limits	
Limit value (mg/m ³)	1800 mg/m ³
Limit value (ppm)	600 ppm
Short time value (mg/m ³)	2250 mg/m ³
Short time value (ppm)	750 ppm
France - Occupational Exposure Limits	
VME (mg/m ³)	3000 mg/m ³
VME (ppm)	1000 ppm
Netherlands - Occupational Exposure Limits	
Grenswaarde TGG 8H (mg/m ³)	1800 mg/m ³
Grenswaarde TGG 8H (ppm)	600 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	1800 mg/m ³
WEL TWA (ppm)	600 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	1000 ppm 1000 ppm

ethanol (64-17-5)	
Belgium - Occupational Exposure Limits	
Limit value (mg/m ³)	1907 mg/m ³ (Alcool éthylique; Belgium; Time-weighted average exposure limit 8 h)
Limit value (ppm)	1000 ppm (Alcool éthylique; Belgium; Time-weighted average exposure limit 8 h)
France - Occupational Exposure Limits	
VME (mg/m ³)	1900 mg/m ³ (Alcool éthylique; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
VME (ppm)	1000 ppm (Alcool éthylique; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
VLE (mg/m ³)	9500 mg/m ³ (Alcool éthylique; France; Short time value; VL: Valeur non réglementaire indicative)
VLE (ppm)	5000 ppm (Alcool éthylique; France; Short time value; VL: Valeur non réglementaire indicative)
Netherlands - Occupational Exposure Limits	
Grenswaarde TGG 8H (mg/m ³)	260 mg/m ³ (Ethanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Grenswaarde TGG 8H (ppm)	136 ppm (Ethanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Grenswaarde TGG 15MIN (mg/m ³)	1900 mg/m ³ (Ethanol; Netherlands; Short time value; Public occupational exposure limit value)
Grenswaarde TGG 15MIN (ppm)	992 ppm (Ethanol; Netherlands; Short time value; Public occupational exposure limit value)

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	1920 mg/m ³ Ethanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
WEL TWA (ppm)	1000 ppm Ethanol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
USA - ACGIH - Occupational Exposure Limits	
ACGIH STEL (ppm)	1000 ppm (Ethanol; USA; Short time value; TLV - Adopted Value)

Ninhydrine (485-47-2)	
Belgium - Occupational Exposure Limits	
Limit value (mg/m ³)	3 mg/m ³ 10 mg/m ³
France - Occupational Exposure Limits	
VME (mg/m ³)	10 mg/m ³ 5 mg/m ³
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	10 mg/m ³ 4 mg/m ³

8.2. Exposure controls

Materials for protective clothing:
GIVE EXCELLENT RESISTANCE: nitrile rubber. GIVE GOOD RESISTANCE: PVA. PVC. neoprene

Hand protection:
Gloves

Eye protection:
Safety glasses

Skin and body protection:
Head/neck protection. Protective clothing

Respiratory protection:
Full face mask with filter type AX at conc. in air > exposure limit

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Gas.
Colour	: Colourless.
Odour	: Almost odourless. Petroleum-like odour.

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Insoluble in water. Soluble in organic solvents. Soluble in aliphatic hydrocarbons. Soluble in aromatic hydrocarbons.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 100 %
Gas group	: Compressed gas
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Highly volatile. Neutral reaction. May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO₂ are formed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

tert-Butyl methyl ether (1634-04-4)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	85 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation)

dimethyl ether, liquefied, under pressure (115-10-6)	
LC50 inhalation rat (mg/l)	309 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (gases))
LC50 inhalation rat (ppm)	164000 ppm (Other, 4 h, Rat, Male, Experimental value, Inhalation (gases))

isopentane (78-78-4)	
LD50 oral rat	> 5000 mg/kg (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Male / female, Read-across, Oral)
LC50 inhalation rat (mg/l)	> 25,3 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Inhalation (vapours))

ethanol (64-17-5)	
LD50 oral rat	10740 mg/kg bodyweight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)

Ninhydrine (485-47-2)	
LD50 oral rat	600 mg/kg (Rat, Oral)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

ethanol (64-17-5)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.
STOT-repeated exposure : Not classified
Aspiration hazard : May be fatal if swallowed and enters airways.

Ninprint	
Vaporizer	Aerosol

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment.

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photolysis in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Toxic to crustacea. Toxic to fishes. Harmful to algae. Slightly harmful to bacteria.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

tert-Butyl methyl ether (1634-04-4)

LC50 fish 1	672 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	472 mg/l (US EPA, 48 h, Daphnia magna, Flow-through system, Fresh water, Experimental value, GLP)

dimethyl ether, liquefied, under pressure (115-10-6)

LC50 fish 1	3082 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); QSAR)
LC50 fish 2	> 1000 mg/l (96 h; Pisces)
LC50 other aquatic organisms 1	> 4000 mg/l (48 h; Daphnia magna)
EC50 Daphnia 1	> 4400 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 96h algae (1)	154,9 mg/l (ECOSAR v1.00, Algae, QSAR)
Threshold limit other aquatic organisms 1	> 4400 mg/l (48 h; Daphnia magna; GLP)
Threshold limit other aquatic organisms 2	> 4000 mg/l (48 h; Daphnia magna)

isopentane (78-78-4)

LC50 fish 1	4,26 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Read-across, GLP)
EC50 Daphnia 1	2,3 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	10,7 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Read-across, GLP)

ethanol (64-17-5)

LC50 fish 2	13000 mg/l (LC50; 96 h; Salmo gairdneri; Static system; Fresh water)
-------------	--

12.2. Persistence and degradability

Ninprint

Persistence and degradability	Readily biodegradable in water.
-------------------------------	---------------------------------

tert-Butyl methyl ether (1634-04-4)

Persistence and degradability	Not readily biodegradable in the soil. Not readily biodegradable in water.
-------------------------------	--

dimethyl ether, liquefied, under pressure (115-10-6)

Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
-------------------------------	---

isopentane (78-78-4)

Persistence and degradability	Readily biodegradable in water.
-------------------------------	---------------------------------

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

ThOD	3,55 g O ₂ /g substance
------	------------------------------------

ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0,8 – 0,967 g O ₂ /g substance
Chemical oxygen demand (COD)	1,7 g O ₂ /g substance
ThOD	2,1 g O ₂ /g substance

Ninhydrine (485-47-2)	
Persistence and degradability	Biodegradability in water: no data available.
ThOD	1,53 g O ₂ /g substance

12.3. Bioaccumulative potential

Ninprint	
Bioaccumulative potential	Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$).

tert-Butyl methyl ether (1634-04-4)	
BCF fish 1	1,5 (28 day(s), Cyprinus carpio, Flow-through system, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1,06 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

dimethyl ether, liquefied, under pressure (115-10-6)	
Partition coefficient n-octanol/water (Log Pow)	0,1 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

isopentane (78-78-4)	
BCF fish 1	171 (Pimephales promelas, Read-across)
Partition coefficient n-octanol/water (Log Pow)	4 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$).

ethanol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0,35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Ninhydrine (485-47-2)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

tert-Butyl methyl ether (1634-04-4)	
Surface tension	19,3 mN/m (19 °C, 100 %, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Koc)	1,063 – 1,354 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Ecology - soil	Highly mobile in soil.
----------------	------------------------

dimethyl ether, liquefied, under pressure (115-10-6)	
Surface tension	0,02 N/m (-40 °C)
Ecology - soil	Not applicable (gas).

isopentane (78-78-4)	
Surface tension	0,01549 N/m (25 °C, 100 vol %)
Partition coefficient n-octanol/water (Log Koc)	2,9 (log Koc, Read-across)
Ecology - soil	Low potential for adsorption in soil.

ethanol (64-17-5)	
Surface tension	0,0245 N/m (20 °C)

12.5. Results of PBT and vPvB assessment

Component	
dimethyl ether, liquefied, under pressure (115-10-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
isopentane (78-78-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
tert-Butyl methyl ether (1634-04-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Incinerate under surveillance with energy recovery.
- Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

- UN-No. (ADR) : UN 1950
UN-No. (IMDG) : UN 1950
UN-No. (IATA) : UN 1950
UN-No. (ADN) : Not applicable
UN-No. (RID) : UN 1950

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: AEROSOLS
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable
Transport document description (ADR)	: UN 1950 AEROSOLS, 2.1, (D), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1950 , 2, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1950 , 2, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1950 , 2.1, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 2.1
Danger labels (ADR)	: 2.1



IMDG

Transport hazard class(es) (IMDG)	: 2
-----------------------------------	-----



IATA

Transport hazard class(es) (IATA)	: 2
-----------------------------------	-----



ADN

Transport hazard class(es) (ADN)	: Not applicable
----------------------------------	------------------



RID

Transport hazard class(es) (RID)	: 2.1
Danger labels (RID)	: 2.1



14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes

Ninprint

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 5F
Special provisions (ADR) : 190, 327, 344, 625
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E0
Transport category (ADR) : 2
Orange plates :



Tunnel restriction code (ADR) : D

Transport by sea

Transport regulations (IMDG) : Subject to the provisions

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 100 %

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : ethanol is listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : ethanol is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : ethanol is listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1A	Flammable gases, Category 1A
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.