



Safety Data Sheet

Cat. # BKC-16

DMF, anhydrous

Size: 50ml





DMF, anhydrous

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 8/9/2013 Revision date: 5/11/2017 Version: 1.1

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

1.1. Product identifier

Product form	: Substance
Trade name	: DMF, anhydrous
Chemical name	: DMF. Anhydrous
EC Index-No.	: 616-001-00-X
EC-No.	: 200-679-5
CAS-No.	: 68-12-2
Product code	: 177D_D091
Type of product	: Pure substance
Formula	: C3H7NO
Synonyms	: dimethyl formamide / DMF / DMFA / formamide, N,N-dimethyl- / formdimethylamide / formic acid dimethylamide / formyldimethylamine / N,N-dimethylformamide / N,N-dimethylmethanamide / N-formyldimethylamine / NSC 5356 / U-4224
Product group	: Raw material
BIG No	: 10018

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	: Reagent Catalyst Solvent Chemical substance for research Rodenticide Pharmaceutical intermediate
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
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	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0344 892 0111	

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Acute toxicity (inhal.), Category 4	H332
Acute toxicity (inhalation:vapour) Category 4	H332
Serious eye damage/eye irritation, Category 2	H319
Reproductive toxicity, Category 1B	H360D
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. May damage fertility or the unborn child. Harmful if inhaled. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

GHS08

CLP Signal word

: Danger

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H360D - May damage the unborn child.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof equipment.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTRE or doctor if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P370+P378 - In case of fire: Use media other than water to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N,N-dimethylformamide substance listed as REACH Candidate	(CAS-No.) 68-12-2 (EC-No.) 200-679-5 (EC Index-No.) 616-001-00-X	100	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Eye Irrit. 2, H319 Repr. 1B, H360D

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Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. 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	: Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not give milk/oil to drink. Do not induce vomiting. Give activated charcoal. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Nausea. Vomiting. Abdominal pain. Dizziness. Excited/restless. High arterial pressure. Feeling of weakness. Enlargement/affection of the liver.
Symptoms/effects after skin contact	: Slight irritation. Dry skin. Symptoms similar to those listed under inhalation.
Symptoms/effects after eye contact	: Irritation of the eye tissue. Conjunctivitis. Inflammation/damage of the eye tissue.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Tingling/irritation of the skin. Skin rash/inflammation. Headache. Gastrointestinal complaints. Loss of appetite. Risk of testicular tumors. Possible premature birth. Cardiac and blood circulation effects. Promotes the clotting of blood.

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	: Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.
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: Flammable liquid and vapour. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD: May be ignited by sparks. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.
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. Face-shield. Protective clothing.
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Emergency procedures : Mark the danger area. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Large spills/in confined spaces: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Avoid ingress of water in the containers. Wash contaminated clothes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

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 : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Contact with water: measure explosive gas-air mixture concentration. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills. Heating: dilute combustible gas/vapour with water curtain.

Methods for cleaning up : Take up liquid spill into inert absorbent material, e.g.: dry sand/earth/vermiculite. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. 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.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use earthed equipment. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Use spark-/explosionproof appliances and lighting system. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid contact of substance with water. Keep container tightly closed.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: reducing agents. oxidizing agents. (strong) acids. (some) metals. halogens. water/moisture.

Storage area : Store at ambient temperature. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Provide for a tub to collect spills. Keep locked up. Unauthorized persons are not admitted. Detached building. Keep only in the original container. May be stored under inert gas. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DMF, anhydrous (68-12-2)

EU - Occupational Exposure Limits

IOELV TWA (mg/m ³)	15 mg/m ³
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IOELV TWA (ppm)	5 ppm
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IOELV STEL (mg/m ³)	30 mg/m ³
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IOELV STEL (ppm)	10 ppm
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United Kingdom - Occupational Exposure Limits

WEL TWA (mg/m ³)	15 mg/m ³
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WEL TWA (ppm)	5 ppm
WEL STEL (mg/m ³)	30 mg/m ³
WEL STEL (ppm)	10 ppm

DMF, anhydrous (68-12-2)

DNEL/DMEL (Workers)

Acute - systemic effects, dermal	26.3 mg/kg bw/day
Acute - systemic effects, inhalation	30 mg/m ³
Acute - local effects, dermal	5900 µg/cm ²
Acute - local effects, inhalation	30 mg/m ³
Long-term - systemic effects, dermal	3.31 mg/kg bw/day
Long-term - local effects, dermal	446 µg/cm ²
Long-term - systemic effects, inhalation	15 mg/m ³
Long-term - local effects, inhalation	15 mg/m ³

DNEL/DMEL (General population)

Acute - systemic effects, dermal	15.8 mg/kg bw/day
Acute - systemic effects, inhalation	30 mg/m ³
Acute - systemic effects, oral	5.94 mg/kg bw/day
Acute - local effects, dermal	3550 µg/cm ²
Acute - local effects, inhalation	30 mg/m ³
Long-term - systemic effects, oral	1.98 mg/kg bw/day
Long-term - systemic effects, inhalation	15 mg/m ³
Long-term - systemic effects, dermal	1.98 mg/kg bw/day
Long-term - local effects, dermal	267 µg/cm ²
Long-term - local effects, inhalation	15 mg/m ³

PNEC (Water)

PNEC aqua (freshwater)	30 mg/l
PNEC aqua (marine water)	3 mg/l

PNEC (Sediment)

PNEC sediment (freshwater)	115.18 mg/kg dwt
PNEC sediment (marine water)	11.52 mg/kg dwt

PNEC (Soil)

PNEC soil	56.97 mg/kg dwt
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PNEC (STP)

PNEC sewage treatment plant	123 mg/l
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8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: butyl rubber. tetrafluoroethylene. GIVE POOR RESISTANCE: natural rubber. neoprene. nitrile rubber. polyethylene. PVA. PVC. viton. nitrile rubber/PVC

Hand protection:

Protective gloves against chemicals (EN374)

Eye protection:

Face shield

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Skin and body protection:

Protective clothing

Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 73.09 g/mol
Colour	: Colourless to light yellow.
Odour	: Unpleasant odour. Smell of fish. Amine-like odour.
Odour threshold	: No data available
pH	: 6.7 (4.0 %)
Relative evaporation rate (butylacetate=1)	: 0.17
Relative evaporation rate (ether=1)	: 60
Melting point	: -60.5 °C (Test data)
Freezing point	: No data available
Boiling point	: 153 °C (Test data)
Flash point	: 57.5 °C (Closed cup, 1013.25 hPa, DIN 51755: Abel-Pensky)
Critical temperature	: 370 °C
Auto-ignition temperature	: 435 °C (1013.25 hPa, DIN 51794: Self-ignition temperature)
Decomposition temperature	: 350 °C
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 3.5 hPa (20 °C)
Vapour pressure at 50 °C	: 25 hPa
Critical pressure	: 44066 hPa
Relative vapour density at 20 °C	: 2.5
Relative density	: 0.95
Relative density of saturated gas/air mixture	: 1
Density	: 950 kg/m ³
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in aromatic hydrocarbons. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in dimethyl sulfoxide. Water: 100 g/100ml (20 °C) Ethanol: complete Ether: complete Acetone: complete
Log Pow	: -1.01 (Experimental value)
Viscosity, kinematic	: 0.968 mm ² /s
Viscosity, dynamic	: 0.92 mPa·s (20 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 2.2 - 16 vol % 70 - 500 g/m ³
Lower explosive limit (LEL)	: 2.2 vol %
Upper explosive limit (UEL)	: 16 vol %

9.2. Other information

Specific conductivity	: 6000000 pS/m
Saturation concentration	: 12 g/m ³
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Slightly volatile.

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SECTION 10: Stability and reactivity

10.1. Reactivity

Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers and with (some) halogens.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled. Harmful if inhaled.

DMF, anhydrous (68-12-2)	
LD50 oral rat	3010 mg/kg bodyweight (BASF test, Rat, Experimental value, Oral)
LD50 dermal rat	> 3160 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	> 5.85 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
LC50 inhalation rat (ppm)	1948 ppm (4 h, Rat, Inhalation)

Skin corrosion/irritation : Not classified
pH: 6.7 (4.0 %)

Serious eye damage/irritation : Causes serious eye irritation.
pH: 6.7 (4.0 %)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : May damage the unborn child.

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

DMF, anhydrous (68-12-2)	
Viscosity, kinematic	0.968 mm ² /s

Potential adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Harmful in contact with skin. Slightly irritant to skin. Harmful if inhaled. Causes serious eye irritation. Caution! Substance is absorbed through the skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Photodegradation in the air. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Not harmful to crustacea. Not harmful to fishes. Groundwater pollutant. Affects the self-cleaning capacity of surface water. Not harmful to activated sludge. Not harmful to algae. Not harmful to bacteria.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

DMF, anhydrous (68-12-2)	
LC50 fish 1	9800 mg/l (96 h, Salmo gairdneri, Flow-through system)
EC50 Daphnia 1	13100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna)

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EC50 72h algae (1)	> 1000 mg/l (DIN 38412-9, Scenedesmus subspicatus)
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12.2. Persistence and degradability

DMF, anhydrous (68-12-2)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.9 g O ₂ /g substance
Chemical oxygen demand (COD)	0.3645 g O ₂ /g substance
ThOD	1.863 g O ₂ /g substance
BOD (% of ThOD)	0.49

12.3. Bioaccumulative potential

DMF, anhydrous (68-12-2)	
BCF fish 1	0.3 - 1.2 (Cyprinus carpio, Test duration: 8 weeks)
Log Pow	-1.01 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

DMF, anhydrous (68-12-2)	
Surface tension	0.036 N/m (25 °C)
Log Koc	0.38 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

DMF, anhydrous (68-12-2)	
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

Waste treatment methods	: Waste treatment methods.
Product/Packaging disposal recommendations	: Do not discharge into surface water. Do not discharge unmonitored into 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. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber 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.
European List of Waste (LoW) code	: 15 01 10* - packaging containing residues of or contaminated by dangerous substances 07 01 04* - other organic solvents, washing liquids and mother liquors 16 05 06* - laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals 16 08 06* - spent liquids used as catalysts

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR)	: UN 2265
UN-No. (IMDG)	: UN 2265
UN-No. (IATA)	: UN 2265
UN-No. (ADN)	: UN 2265
UN-No. (RID)	: UN 2265

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: N,N-dimethylformamide
Proper Shipping Name (IMDG)	: N,N-dimethylformamide
Proper Shipping Name (IATA)	: N,N-dimethylformamide

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Proper Shipping Name (ADN)	: N,N-dimethylformamide
Proper Shipping Name (RID)	: N,N-dimethylformamide
Transport document description (ADR)	: UN 2265 N,N-dimethylformamide, 3, III, (D/E)
Transport document description (IMDG)	: UN 2265 N,N-dimethylformamide, 3, III
Transport document description (IATA)	: UN 2265 N,N-dimethylformamide, 3, III
Transport document description (ADN)	: UN 2265 N,N-dimethylformamide, 3, III
Transport document description (RID)	: UN 2265 N,N-dimethylformamide, 3, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 3
Danger labels (ADR)	: 3



IMDG

Transport hazard class(es) (IMDG)	: 3
Danger labels (IMDG)	: 3



IATA

Transport hazard class(es) (IATA)	: 3
Hazard labels (IATA)	: 3



ADN

Transport hazard class(es) (ADN)	: 3
Danger labels (ADN)	: 3



RID

Transport hazard class(es) (RID)	: 3
Danger labels (RID)	: 3



14.4. Packing group

Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: III
Packing group (RID)	: III

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14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : Subject
Classification code (ADR) : F1
Hazard identification number (Kemler No.) : 30
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •2Y

Transport by sea

Transport regulations (IMDG) : Subject
IBC packing instructions (IMDG) : IBC03
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D

Air transport

Transport regulations (IATA) : Subject to the provisions

Inland waterway transport

Classification code (ADN) : F1
Carriage permitted (ADN) : T

Rail transport

Transport regulations (RID) : Subject
Classification code (RID) : F1

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

No REACH Annex XVII restrictions

N,N-dimethylformamide is on the REACH Candidate List

DMF, anhydrous is not on the REACH Annex XIV List

N,N-dimethylformamide is not 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.

N,N-dimethylformamide is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

VOC content : 100 %

15.1.2. National regulations

Listed on IARC (International Agency for Research on Cancer)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

Listed on the Canadian DSL (Domestic Substances List)

Listed on EPA Hazardous Air Pollutant (HAPS)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
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DMF, anhydrous

Safety Data Sheet

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

Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360D	May damage the unborn child.

Safety Data Sheet applicable for regions : GB - United Kingdom

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.