

Safety Data Sheet

TWIN JET SYSTEM 2

Safety Data Sheet dated 23/11/2012, version 2

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

- 1.1. Product identifier
Trade name: TWIN JET SYSTEM 2
- 1.2. Relevant identified uses of the substance or mixture.
Recommended use:
Admixture for concrete
Uses advised against: ==
- 1.3. Details of the supplier of the safety data sheet
Supplier:
MAPEI S.p.A. -Via Cafiero 22 - Milan -ITALY
Competent person responsible for the safety data sheet:
sicurezza@mapei.it
- 1.4. Emergency telephone number
MAPEI S.p.A. - Tel. +(39)02376731 - (office hours)
Poison Centre - Ospedale di Niguarda - Milan - Tel. +39/02/66101029

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture
Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:
Properties / Symbols:
This product is not a hazardous article and need not be labelled according to EC Directive 67/548, 99/45 as amended.

Adverse physicochemical, human health and environmental effects:
No other hazards
- 2.2. Label elements
Special Provisions:
Safety data sheet available for professional user on request.

Special provisions according to Annex XVII of REACH and subsequent amendments:
None
- 2.3. Other hazards
vPvB Substances: None - PBT Substances: None
Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

- 3.1. Substances
N.A.
- 3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and corresponding classification:
1% - 2.5% diethylene glycol
REACH No.: 01-2119457857-21-XXXX, Index number: 603-140-00-6, CAS: 111-46-6, EC: 203-872-2
Xn; R22

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- ⚠ 3.1/4/Oral Acute Tox. 4 H302
- ⚠ 3.9/2 STOT RE 2 H373

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wash immediately with water for at least 10 minutes.

In case of Ingestion:

A suspension of activated charcoal in water, or petroleum jelly may be administered.

Wash the mouth thoroughly and drink plenty of water. In case of disease consult a physician immediately and present this safety-data sheet.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

No specific hazards are encountered under normal product use.

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

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

None in particular.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

The product does not present a fire hazard

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

The original ingredients or unidentified toxic and/or irritant compounds may be present in the combustion fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Limit leakages with earth or sand.

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

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Wash with plenty of water.
Retain contaminated washing water and dispose it.

6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
Store above 5°C.
- 7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
diethylene glycol - CAS: 111-46-6
SUVA - LTE mg/m³: 44 mg/m³, 10 ppm - STE mg/m³: 176 mg/m³, 40 ppm
NDS - LTE mg/m³: 10 mg/m³
- DNEL Exposure Limit Values
diethylene glycol - CAS: 111-46-6
Worker Industry: 106 mg/kg - Exposure: Human Dermal Long Term, systemic effects
Worker Industry: 60 mg/m³ - Exposure: Human Inhalation Long Term, local effects
Consumer: 53 mg/kg - Exposure: Human Dermal Long Term, systemic effects
Consumer: 12 mg/m³ - Exposure: Human Inhalation Long Term, local effects
- PNEC Exposure Limit Values
diethylene glycol - CAS: 111-46-6
Target: Fresh Water - Value: 10 mg/l
Target: Marine water - Value: 1 mg/l
Target: Freshwater sediments - Value: 20.9 mg/kg
Target: Soil (agricultural) - Value: 1.53 mg/kg
- 8.2. Exposure controls
- Eye protection:
Not needed for normal use. Anyway, operate according good working practices.
- Protection for skin:
No special precaution must be adopted for normal use.
- Protection for hands:
The use of LLPDE (0,06 mm), nitrile (0,4) or butyl (0,5 mm) gloves is suggested.
Latex gloves are not recommended.
- Respiratory protection:
Not needed for normal use.
Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

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Thermal Hazards:
None
Environmental exposure controls:
None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	liquid
Colour:	white
Odour:	typical
Odour threshold:	N.A.
pH:	7
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	100 °C
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	== °C
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	1.0±0,05 g/cm ³ (23°C)
Vapour density (air=1):	N.A.
Solubility in water:	soluble
Solubility in oil:	insoluble
Viscosity:	N.A.

Auto-ignition temperature:	== °C
Explosion limits(by volume):	==
Decomposition temperature:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Explosive properties:	==
Oxidizing properties:	N.A.

9.2. Other information

Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
None in particular.
- 10.6. Hazardous decomposition products
None.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Route(s) of entry:

Ingestion: Yes
Inhalation: No
Contact: No

Toxicological information related to the product:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

diethylene glycol - CAS: 111-46-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 4.6 mg/l - Duration: 4h
Test: LD50 - Route: Skin - Species: Rabbit 13300 mg/kg
Test: LD50 - Route: Oral - Species: Rat 19600 mg/kg
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Corrosive/Irritating Properties:

Eye:

The product can cause a temporary irritation by contact.

Sensitizing Properties:

No effects are known.

Cancerogenic Effects:

No effects are known.

Mutagenic Effects:

No effects are known.

Teratogenic Effects:

No effects are known.

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Not available data on the mixture

Aquatic toxicity: the preparation is not to be considered toxic to the aquatic environment based on components.

LC50>100mg/l - aquatic species (calculated data following 1999/45/EC Directive).

Adopt good industrial practices, so that the product is not released into the environment.

diethylene glycol - CAS: 111-46-6

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 75200 mg/l - Duration h: 96

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Endpoint: EC50 - Species: Daphnia > 10000 mg/l - Duration h: 24

Endpoint: EC50 - Species: Algae = 2700 mg/l - Duration h: 192

- 12.2. Persistence and degradability
N.A.
- 12.3. Bioaccumulative potential
N.A.
- 12.4. Mobility in soil
N.A.
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects
Not available data on the mixture

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover if possible. In so doing, comply with the local and national regulations currently in force. 91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments.
Disposal of not hardened product (EC waste code) : 16 10 04
The suggested European waste code is just based on the composition of the product.
According to the specific process or application field a different waste code may be necessary.

SECTION 14: Transport information

- 14.1. UN number
UN Number: ==
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
Rail/Road(RID/ADR): no dangerous good
ADR-Upper number: NA
Air (ICAO/IATA): no dangerous good
Sea (IMO/IMDG): no dangerous good
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
ADR Environmental Pollutant:
Marine pollutant: No
N.A.
- 14.6. Special precautions for user
N.A.
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
No

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Dir. 2006/8/EC
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP)

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Regulation (EU) n. 453/2010 (Annex I)

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

REACH Regulation (1907/2006)

REACH Regulation (1907/2006) – All. XVII: N.A.

REACH Regulation n°1907/2006 (REACH) – Art. 59 (Substances in "Candidate List"): N.A.

CLP Regulation n°1272/2008 (CLP) and s.m.i.

Directive n°1999/45/CE (Dangerous Preparation) and s.m.i.

Directive n°67/548/CEE (Substances) and s.m.i.

Legislative Decree no. 81 of the 9th of April 2008 Title XI "Dangerous substances - Chapter I - Protection against chemical agents"

Directive 2000/39/CE and s.m.i. (Professional threshold limit)

Legislative Decree no. 152 of the 3rd of April 2006 and subsequent modifications and additions. (Environmental regulations)

Directive 105/2003/CE (Seveso III): N.A.

ADR Agreement – IMDG Code – IATA Regulation

VOC (2004/42/EC) : N.A. g/l

TSCA (USA) :

ALL INGREDIENTS LISTED OR EXEMPTED

DSL/NDL (CANADA) :

ALL INGREDIENTS LISTED ON DSL OR EXEMPTED

15.2. Chemical safety assessment

No

SECTION 16: Other information

Text of phrases referred to under heading 3:

R22 Harmful if swallowed.

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

NIOSH - Registry of toxic effects of chemical substances

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,

Commission of the European Communities

SAX'S - Dangerous properties of industrial materials

Istituto Superiore di Sanità - Inventario Nazionale Sostanze Chimiche

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

This MSDS cancels and replaces any preceding release.

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ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
OEL:	European threshold limit value
VLE:	Threshold Limiting Value.
WGK:	German Water Hazard Class.
TSCA:	United States Toxic Substances Control Act Inventory
DSL:	DSL - Canadian Domestic Substances List
N.A.:	N.A.
N.D.:	