

6. Accidental release measures

Extinguish the sources of ignition or heat; cover the spillage with absorbent material. Collect the spilt material and discard the remainder spraying water, if not contraindicated (see section 10). For information on environmental and health risks, protection of the respiratory airways, ventilation and individual protective measures, refer to the other sections of this sheet. Spillage in waters: remove the liquid from the surface with flameproof pumps or manual pumps or suitable absorbent material. Resort to sinking and/or dispersion of the product with suitable substances in open waters, if permitted by the law.

7. Handling and storage

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, naked flames and sparks and other sources of ignition.

8. Exposure control / personal protection.

8.1 Exposure limit values

Name mg/m ³	Type	State	TWA/8h ppm	STEL/15min mg/m ³ ppm	
N-METHYL-2-PYRROLIDONE					
OEL		IRL	25		Skin
WEL		UK	25	75	Skin

8.2 Exposure controls

In order to minimize exposure as far as possible, it is strongly recommended to use adequate individual protective measures, such as: masks suitable for the product, goggles, gloves and overall. Do not eat, drink or smoke while handling it. Accurately wash the hands with soap and water before meals and at the end of the work shift.

9. Physical and chemical properties

Color	Colorless
Odor	Typical
Appearance	Liquid
Solubility	In water
pH	9-11
Boiling point	100 °C
Flash point	> 75 °C
Explosive properties	N.A.
Vapor pressure	N.A.
Specific gravity	N.A.

10. Stability and reactivity

The product is stable in normal conditions of use and storage. When heated or in the event of a fire, carbonoxides may be released and vapors which are dangerous to health. The vapors may also form explosive mixtures with the air.

N-methyl-2-pyrrolidone is stable up to 315 °C in inert atmosphere. In the presence of air, it slowly oxidizes to form hydroperoxides. Due to thermal decomposition, it yields toxic gases of nitrogen and carbon oxides. It is completely miscible with water giving a neutral or slightly basic reaction. It doesn't attack common materials, but melts different types of plastic.

11. Toxicological information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled carefully according to good industrial practices. This preparate may have slight health effects on sensitive people, by inhalation and/or cutaneous absorption and/or contact with eyes and/or ingestion.

N-methyl-2-pyrrolidone: no acute or chronic cases of intoxication or sensitization have been reported. On healthy volunteers, repeated skin applications caused modest and transient erythema. The substance enhances the absorption of several substances through the skin.

A limit of exposure of 400 mg/cu.m is recommended (Fiche toxicologique, 1987). Experiments conducted on mice and rats by the oral and inhalation route revealed no teratogenic effects, at non embryotoxic doses. It is not mutagenic with Ames test.

N-METHYL-2-PYRROLIDONE: oral LD50 (mg/kg) 7000 (RAT) ; dermal LD50 (mg/kg) 7000 (RAT) ; inhalation LC50 (rat) 5,1 mg/l/4h

12. Ecological information

Use this product according to good working practices. Avoid litter. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

13. Disposal consideration

Consider the possibility of burning the product in a suitable incinerator.

Acid or basic products must always be neutralized before undergoing any treatment, including biological treatment whenever feasible. If the waste is solid, it can be disposed of in a landfill.

14. Transport information

This substance is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the Transport Association (IATA) regulations.

15. Regulatory information

Warning symbols: None

Hazard sentences (R): None

- S 2 KEEP OUT OF THE REACH OF CHILDREN.
- S23 DO NOT BREATHE AEROSOL

Safety data sheet available upon request for professional users.

Danger labeling under directives 67/548/EEC and 1 999/45/EC and following amendments and adjustments.

16. Other information

Text of -R- phrases quoted in section 3 of the sheet.

R 36/3 8 IRRITATING TO EYES AND SKIN.

GENERAL BIBLIOGRAPHY

1. Directive 1 999/45/EC and following amendments;
2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
4. The Merck Index. - 10th Edition;
5. Handling Chemical Safety;
6. Niosh - Registry of Toxic Effects of Chemical Substances;
7. INRS - Fiche Toxicologique (toxicological sheet);
8. Patty - Industrial Hygiene and Toxicology;
9. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition;

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. verify the suitability and thoroughness of provided information according to each specific use of the product . This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, the current health and safety laws and regulations. The producer is relieved from any liability arising from

Changes to previous review

The following sections were modified:

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