

**NITTO DENKO**

# Material Safety Data Sheet (MSDS)

Prepared on : 2004/04/01

## 1. Product and company identification

Product name NITOFLOX

Name of product(chemical name,brand name, etc.) : NO.973UL-S

Supplier product code:38529-40-15-0-0-E 0804060026

### Company identification

Name of the supplier:NITTO DENKO CORPORATION KANTO PLANT

Address : 366-8521 1-8-5,HATARA,FUKAYA,SAITAMA,JAPAN

A Section in Charge : QUALITY ASSURANCE SECTION

Telephone number : 81-48-571-3177 FAX number : 81-48-573-1043

Emergency telephone number : 81-48-571-3171

## 2. Composition / information on ingredients

Distinction between a  
substance and a  
preparation : Compound

The common chemical name or the generic name	Glass Cloth	Silicone Adhesive	Polytetrafluoroethylene
Synonyms	-	-	PTFE
Chemical formula or structural formula	SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub>	-	(CF <sub>2</sub> -CF <sub>2</sub> ) <sub>n</sub>
Content(mass%)	20 to 50	10 to 40	30 to 70
The serial number of the notifications on the official gazette	-	7-476	6-939
CAS number	65997-17-3	-	9002-84-0

## 3. Hazards identification

Hazards classification : Not specified

Most important hazards and effects of the product

Adverse human health effects :

PTFE: Inhalation of the micro particles from heating item above melting point or above 260 deg C cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough for long duration.

Trace amount of HF and CF were evolved at over 400 deg C.

Environmental effects :

Do not release into the environment.

Physical and chemical hazards :

PTFE: Inhalation of the micro particles from heating item above melting point or above 260 deg C cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough for long duration.

Trace amount of HF and CF were evolved at over 400 deg C.

Specific hazards : PTFE: Inhalation of the micro particles from heating item above melting point or above 260 deg C cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough for long duration.

Trace amount of HF and CF were evolved at over 400 deg C.

#### 4. First-aid measures

Inhalation : No specific intervention is indicated as item is not likely to be hazardous by inhalation.

Consult a physician if necessary.

If exposed fume from overheating or combustion, move to fresh air.

Consult a physician if symptoms persist.

Skin contact : Glass fiber might be scratchy by skin contact, so washing the face and hands after use is advisable.

If molten fluoropolymer gets on skin, cool rapidly by cold water.

Do not attempt to peel polymer from skin.

Obtain medical treatment for thermal burn.

Eye contact : In case of contact, remove item carefully, flush eyes with water, and consult a physician.

Ingestion : Make the patient forcibly vomit immediately.

Consult a physician if necessary.

A brief description of the most important symptoms and effect :

Protection of first-aiders :

Special notes to a physician :

#### 5. Fire-fighting measures

Extinguishing media : Ordinary extinguisher (water, foam, carbon dioxide, dry sand, powder, etc. not specified especially.)

Specific hazards : It might be occurred the inhalation by the fume and decomposed gasses, and the burn by melted glass.

Protection of firefighters : Wear the full-face mask, self-contained breathing apparatus and full protective equipment.

#### 6. Accidental release measures

Personal precautions : Not applicable

Environmental precautions : Not applicable

Methods for Cleaning up

Recovery : None due to no possibility of release  
 Neutralization :  
 Disposal :

## 7. Handling and storage

### Handling

Technical measures : Do not heat item above 260 deg C.  
 Keep with local exhaust ventulation and aspirator in using such a high temperature.  
 Prevention of user exposure : If the much fuzz was scattered, wear the dust-proof mask and protective goggles.  
 Precautions : Do not heat item above 260 deg C.  
 Safe handling advice : Do not heat item above 260 deg C.  
 Keep with local exhaust ventulation and aspirator in using such a high temperature.

### Storage

Technical measures : Not specified on safety viewpoints.  
 Incompatible products : Nothing particular  
 Storage conditions  
 Suitable storage conditions : Avoid wet and direct sunshine, and store it in a room temperature and humidity.  
 Storage conditions to be avoided : Avoid storage at high temperatures and humidity.  
 Packaging materials : Not restrict  
 Recommended : Not restrict

## 8. Exposure controls / personal protection

Engineering measures : If the much fuzz was scattered, wear the dust-proof mask and protective goggles.  
 Ventilation use local exhaust to completely remove vapors and fumes liberated during processing above 260 deg C from work area.  
 Personal protective equipment  
 Respiratory protection : If the much fuzz was scattered, wear the dust-proof mask.  
 Not required usually.  
 However need with an air-line mask in case that human was exposed with deductive compounds in heating process.  
 Hand protection : Not required usually.  
 If the much fuzz was scattered, wear the protective gloves.  
 Eye protection : Not required usually.  
 If the much fuzz was scattered, wear the protective goggles.  
 Skin and body protection : Not required usually.  
 If there is a potential contact with hot/molten material, wear the heat resistant clothing, glasses, gloves and foot wear.

Some products only become hazardous under special condition :  
(Large amount,High concentrations,Elevated temperature,Elevated pressure)

Above 260 deg C

## 9. Physical and chemical properties

### Physical state

Form :	Tape Solid
Colour :	Yellowish White
Odour :	Nothing
pH :	Not applicable due to solid.
Specific temperature / temperature ranges at which changes in physical state occur	
Boiling point :	No data
Fusing point :	327 deg C
Flash point :	No data
Explosion properties :	No data
Density :	2.1 to 2.3
Solubility,with indication of the solvert :	Adhesive is soluble in solvent as a toluene.

## 10. Stability and reactivity

Stability :	Nothing particular at less 260 deg C
Possible hazardous reactions occurring under specific conditions :	Nothing particular
Conditions to avoid :	Avoid over 260 deg C
Materials to avoid :	Nothing particular
Hazardous decomposition products :	PTFE: Inhalation of the microparticles from heating item above melting point or above 260 deg C may cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough for long duration.  Trace amounts of perfluorobuthylene, HF and CF were evolved at over 470 deg C.

## 11. Toxicological information

Acute toxicity :	PTFE: Oral LD50 (Rat) > 1,250mg/kg
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Local toxicity :	No information is available.
Sensitization :	PTFE: No information due to no-absorption on skin contact.  Inhalation of the microparticles from heating item above melting point or above 260 deg C may cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough for long duration.
Specific effects	
Carcinogenicity :	PTFE: Conference of Japan Industry Sanitation Society (1993), OSHA(1993) and NTP has no description.  IARC: Group 3
Other :	PTFE: Animal test: Effects in animals from single exposure by inhalation to high concentration of the dust include irritation of lungs.  Repeat oral doses resulted in no observable toxic effects except for alternation in the number of circulating white blood cells after long-term dosing (25% of diet for 90 days).  Test demonstrate no developmental toxicity in animals and no genetic damage in animals or in bacterial cell cultures.

## 12. Ecological information

Information on fate	
Mobility :	Really inert, so image no influence.
Persistence / degradability :	No information is available.
Bioaccumulation :	No information is available.
Ecotoxicity :	No information is available.

## 13. Disposal considerations

Product :	To be discarded as the industrial waster discarding agent by landfill without burning in accordance with regional regulation.
Waste from residues :	To be discarded as the industrial waster discarding agent by landfill without burning in accordance with regional regulation.
Contaminated packaging :	No contamination

## 14. Transport information

Informations for Code and classification at international regulations	
Land :	Not specified
Inland waterways :	Not specified
Sea :	Not specified
Air :	Not specified

The UN classification number : Not correspond  
Specific precautionary transport measures and conditions : Not specified

## 15. Regulatory information

Regulations : Not specified

## 16. Other information

1. Handle this product with great care, since the evaluation of its danger and toxicity may not be sufficient.
2. The above information is based on the most up-to-date data, yet the values of content and physical/chemical properties are not guaranteed.
3. The cautionary statements are applicable for ordinary handling only. For special handling, please devise safety measures appropriate for the use.