

Safety Data Sheet

Nordflex H 0103



Safety Data Sheet dated 25/3/2014, version 5

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

1.1. Product identifier

Mixture identification:

Trade name: Nordflex H 0103

Trade code: H 0103

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

Catalyst for epoxy coating products for industrial use.

Only for professional use.

Not for autobody shop use.

1.3. Details of the supplier of the safety data sheet

Company:

Ind. Chimica Reggiana I.C.R. Spa

Via Gasparini, 7 42124 REGGIO EMILIA Italia

Tel. +39 0522/517803 Fax +39 0522/514384

Competent person responsible for the safety data sheet:

sdsre@icrsprint.it

1.4. Emergency telephone number

Tel. +39 0522-517803

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:

F Highly flammable

Xn Harmful

Xi Irritant

R Phrases:

R11 Highly flammable.

R20/21 Harmful by inhalation and in contact with skin.


R36/37/38 Irritating to eyes, respiratory system and skin.


R43 May cause sensitization by skin contact.


R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.


R65 Harmful: may cause lung damage if swallowed.


EC regulation criteria 1272/2008 (CLP):


 Danger, Flam. Liq. 2, Highly flammable liquid and vapour.


 Warning, Acute Tox. 4, Harmful if inhaled.


 Warning, Acute Tox. 4, Harmful in contact with skin.


 Warning, Eye Irrit. 2, Causes serious eye irritation.

 Warning, STOT SE 3, May cause respiratory irritation.

 Warning, Skin Irrit. 2, Causes skin irritation.

 Warning, Skin Sens. 1, 1A, 1B, May cause an allergic skin reaction.

 Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure if inhaled.

 Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Symbols:

Xn Harmful

F Highly flammable

R Phrases:

R11 Highly flammable.

R20/21 Harmful by inhalation and in contact with skin.

R36/37/38 Irritating to eyes, respiratory system and skin.

R43 May cause sensitization by skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R65 Harmful: may cause lung damage if swallowed.

S Phrases:

S23 Do not breathe spray

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S25 Avoid contact with eyes.
S29 Do not empty into drains.
S36/37 Wear suitable protective clothing and gloves.
S51 Use only in well-ventilated areas.
S7/9 Keep container tightly closed and in a well-ventilated place.

Contents:

Xylene
Triethylenetetramine

Symbols:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
H312+H332 Harmful in contact with skin or if inhaled.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H304 May be fatal if swallowed and enters airways.

Precautionary statements:

P260 Do not breathe vapours.
P271 Use only outdoors or in a well-ventilated area.
P280.D Wear protective gloves and clothing and eye protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P331 Do NOT induce vomiting.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Contents:

Triethylenetetramine
Xylene

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 related classification:

40% - 50% Xylene

REACH No.: 01-2119488216-32, Index number: 601-022-01-6, CAS: 1330-20-7, EC: 215-535-7

Xn,Xi; R36/37/38-48/20-65-10-20/21



2.6/3 Flam. Liq. 3 H226



3.1/4/Inhal Acute Tox. 4 H332



3.1/4/Dermal Acute Tox. 4 H312



3.3/2 Eye Irrit. 2 H319



3.8/3 STOT SE 3 H335



3.2/2 Skin Irrit. 2 H315



3.9/2 STOT RE 2 H373




3.10/1 Asp. Tox. 1 H304

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5% - 7% butanone

REACH No.: 01-2119457290-43, Index number: 606-002-00-3, CAS: 78-93-3, EC: 201-159-0
F,Xi; R11-36-66-67

 2.6/2 Flam. Liq. 2 H225

 3.3/2 Eye Irrit. 2 H319

 3.8/3 STOT SE 3 H336

1% - 3% ethylbenzene

REACH No.: 01-2119489370-35, Index number: 601-023-00-4, CAS: 100-41-4, EC: 202-849-4
F,Xn; R11-20

 2.6/2 Flam. Liq. 2 H225

 3.1/4/Inhal Acute Tox. 4 H332

DECLJ*


1% - 3% Triethylenetetramine

Index number: 612-059-00-5, CAS: 112-24-3, EC: 203-950-6
Xn,Xi,C; R21-34-43-52/53

 3.2/1B Skin Corr. 1B H314

 3.4.2/1-1A-1B Skin Sens. 1, 1A, 1B H317

4.1/C3 Aquatic Chronic 3 H412

 3.1/4/Dermal Acute Tox. 4 H312

*DECLJ: Substance classified accordingly to Note J of the Annex I of directive 67/548/EEC. The 'Carcinogenic' classification is not necessary if you can demonstrate that the substance contains less than 0.1% weight/weight of benzene

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

See section 11 for known symptoms and effects.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

Do not use water jets. Water may not be effective fire fighting measure, however it can be used to cool closed containers close to flames as to avoid bursting and exploding.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

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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 all sources of ignition.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.
- Provide adequate ventilation.
- Use appropriate respiratory protection.
- See protective measures under point 7 and 8.

6.2. Environmental precautions

- Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
- Retain contaminated washing water and dispose it.
- In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
- Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

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.
- Use localized ventilation system.
- Don't use empty container before they have been cleaned.
- Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
- Contaminated clothing should be changed before entering eating areas.
- Do not eat or drink while working.
- See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

- Always keep the containers tightly closed.
- Always keep in a well ventilated place.
- Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
- Keep away from food, drink and feed.
- Instructions as regards storage premises:
 - Cool and adequately ventilated.

7.3. Specific end use(s)

- See Point 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- Xylene - CAS: 1330-20-7
 - EU - LTE(8h): 221 mg/m³, 50 ppm - STE(): 442 mg/m³, 100 ppm
 - ACGIH - LTE(8h): 221 mg/m³, 50 ppm - STE(): 442 mg/m³, 100 ppm
- butanone - CAS: 78-93-3
 - EU - LTE(8h): 600 mg/m³, 200 ppm - STE: 900 mg/m³, 300 ppm
- ethylbenzene - CAS: 100-41-4
 - EU - LTE: 442 mg/m³, 100 ppm - STE: 884 mg/m³, 200 ppm

DNEL Exposure Limit Values

- Xylene - CAS: 1330-20-7
 - Worker Professional: 289 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, local effects
 - Worker Professional: 180 mg/kg - Consumer: 108 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
 - Worker Professional: 77 mg/m³ - Consumer: 14.8 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects
 - Consumer: 1.6 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

- Xylene - CAS: 1330-20-7
 - Target: STP - Value: 6.58 mg/l
 - Target: Marine water - Value: 0.327 mg/l
 - Target: Intermittent emissions - Value: 0.327 mg/l
 - Target: Freshwater sediments - Value: 12.46 mg/kg
 - Target: Marine water sediments - Value: 12.46 mg/kg
 - Target: Soil - Value: 2.31 mg/kg
 - Target: Fresh Water - Value: 0.327 mg/l

8.2. Exposure controls



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Eye protection:

Use face-mask or close fitting safety goggles (e.g. EN166 F3). Do not wear contact lenses.

Protection for skin:

Wear safety clothing that ensure full skin protection in accordance to EN 14605 Type 4 in case of spills or spray (e.g. Tyrek). Please note: safety clothing must be changed immediately if it comes in contact with product.

Protection for hands:

Use protective gloves that provides comprehensive protection, EN374 Class 3 (B-F-I). Permeation time > 30 minutes; 0.4 mm thickness.

Respiratory protection:

Use adequate protective respiratory devices, using Filter "A" (Brown colour) for organic gas and vapors with boiling points over 65°C.

Thermal Hazards:

None

Environmental exposure controls:

Emissions from ventilation systems or from work processes must be check as to ensure compliance to environmental protection legislation. In some cases the addition of vapour scrubbers, filters or other system modification may be necessary in order to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|------------------------|
| Appearance and colour: | Liquid, yellow |
| Odour: | Slightly aromatic |
| Odour threshold: | Typical of solvent |
| pH: | N.A. (organic solvent) |
| Melting point / freezing point: | N.D. |
| Initial boiling point and boiling range: | 79 - 81 °C |
| Solid/gas flammability: | N.A. |
| Upper/lower flammability or explosive limits: | 0,9 - 7 % vol |
| Vapour density: | N.D. |
| Flash point: | -6 °C |
| Evaporation rate: | N.D. |
| Vapour pressure: | 104 hPa |
| Relative density: | 0,92 ± 0,05 g/cm³ |
| Solubility in water: | Insoluble |
| Solubility in oil: | N.D. |
| Auto-ignition temperature: | 404 °C |
| Decomposition temperature: | N.D. |
| Viscosity: | N.D. |
| Explosive properties: | N.D. |
| Oxidizing properties: | N.D. |

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under recommended use and storage conditions (see point 7).

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth) and powerful reducing agents.

It may generate toxic gases on contact with oxidising mineral acids, halogenated organic substances, organic peroxides and hydroperoxides, and powerful oxidising agents.

It may catch fire on contact with powerful oxidising agents.

10.4. Conditions to avoid

Avoid accumulating electrostatic charge.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

Xylene - CAS: 1330-20-7

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat = 6350 Ppm - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat = 3523 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 4350 mg/kg

butanone - CAS: 78-93-3

a) acute toxicity:



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Test: LC50 - Route: Inhalation - Species: Mouse = 40 mg/l

Test: LD50 - Route: Oral - Species: Rat = 2737 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 13 g/kg

ethylbenzene - CAS: 100-41-4

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Mouse = 35500 mg/m³

Test: LC50 - Route: Inhalation - Species: Rat = 55000 mg/m³

Test: LD50 - Route: Oral - Species: Rat = 3500 mg/kg

Triethylenetetramine - CAS: 112-24-3

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 1001 mg/kg - Source: OECD 423

Test: LD50 - Route: Skin - Species: Rat = 301 mg/kg - Source: OECD 402

Xylene - CAS: 1330-20-7

OBSERVATIONS ON HUMAN SUBJECTS NON-PROFESSIONAL EXPOSURE - Effects following acute exposure:

Symptoms of intense exposure are: dermatitis, eczema, irritation to the eyes and to the respiratory tract.

Inhaling the vapours can cause dizziness, headache, nausea, incoordination, excitability, narcosis, anaemia, and paraesthesia of the hands and feet.

PROFESSIONAL EXPOSURE - Effects following acute exposure:

Narcotic at high concentrations.

Irritation through inhalation at 200 ppm (TCLo). Inhalation of 200 ppm has irritating effects in human subjects.

Human subject (oral)(LDLo): 50 mg/kg.

Inhalatory human subject (LCLo) 10000 ppm/6h.

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

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

Triethylenetetramine - CAS: 112-24-3

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 2.5 mg/l - Duration h: 72

Endpoint: EC50 - Species: Daphnia = 31.1 mg/l - Duration h: 96

12.2. Persistence and degradability

Product can be regarded as not easily biodegradable considering its component substances.

12.3. Bioaccumulative potential

Not bioaccumulative

12.4. Mobility in soil

Do not mix with waste water, rain or surface water. Floats on water, evaporates from liquid and solid surfaces but a significant amount may penetrate and pollute water table.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The empty containers must be considered special waste materials to take to dump of type 2B. If previously cleansed, they can be admitted in first class dumps.

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

Limited quantities, not subject to ADR norms for internal packaging of up to 5 litres and maximum packaging of 30kg.

14.1. UN number

ADR-UN number: 1263

IMDG-Un number: 1263

14.2. UN proper shipping name

Shipping name: Paints

14.3. Transport hazard class(es)

ADR/RID:



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| | |
|---|-----------------|
| Class: | 3 |
| Label: | 3 |
| Classification Code: | F1 |
| Maritime (IMDG/IMO): | |
| Class: | 3.2 |
| Label: | 3 |
| 14.4. Packing group | |
| ADR Packing Group:: | II |
| IMDG-Packing group: | II |
| 14.5. Environmental hazards | |
| Marine pollutant: | No |
| 14.6. Special precautions for user | |
| IMDG-EMS: | F-E, <u>S-E</u> |
| 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)

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

Volatile Organic compounds - VOCs = 528.5 g/Kg= 486.22 g/l

Volatile CMR substances = 0.00 %

Halogenated VOCs which are assigned the risk phrase R40 = 0.00 %

Organic Carbon - C = 0.47

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

15.2. Chemical safety assessment

No

SECTION 16: Other information

Text of phrases referred to under heading 3:

R10 Flammable.

R11 Highly flammable.

R20 Harmful by inhalation.

R20/21 Harmful by inhalation and in contact with skin.

R21 Harmful in contact with skin.

R34 Causes burns.

R36 Irritating to eyes.

R36/37/38 Irritating to eyes, respiratory system and skin.

R43 May cause sensitization by skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H312 Harmful in contact with skin.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H315 Causes skin irritation.

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

H304 May be fatal if swallowed and enters airways.

H225 Highly flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H314 Causes severe skin burns and eye damage.



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H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

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

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

CCNL - Appendix 1

Insert further consulted bibliography

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.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

| | |
|---------|--|
| 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. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| 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. |
| N.A.: | Not applicable. |
| N.D.: | Not determined. |
| 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. |
| TWATLV: | Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). |

