

SAFETY DATA SHEET

Date of issue: 09.10.2007

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Number: NB_8_07

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**1.1. Identification of the preparation:** NAUTIC VE 60 ADHESIVE**1.2. Use of the preparation:** Adhesive NAUTIC VE two-component products based on vinylester resins. Designed for joining and filling polyester laminated elements in the shipbuilding industry.**1.3. Company/undertaking identification:** NOVOL Sp. z o.o. Tel: (061) 810-98-00
ul. Żabikowska 7/9 Fax: (061) 810-98-09
62-052 Komorniki www.novol.pl
Emergency tel: (061) 810-98-00**2. HAZARDS IDENTIFICATION****HEALTH HAZARDS:** Harmful product. Harmful by inhalation. Irritating to eyes and skin.**DANGEROUS PROPERTIES:** Flammable liquid; avoid contact with strong oxidants.**OTHER:** No data available.**3. COMPOSITION / INFORMATION ON INGREDIENTS**

EEC No.	Name of the substance	WE No.	CAS No.	Classification of the substance	Marking of the substance	Composition
601-026-00-0	Styren	202-851-5	100-42-5	R10; Xn; R20; Xi; R36/38	Xn R: 10-20-36/38 S: (2-)23	5-15%

4. FIRST AID MEASURES**GENERAL INFORMATION:** See 11 point Product Date Sheet.**INHALATION:** Move injured on fresh air. Ensure calm, quiet surroundings. Do artificial respiration if need. Call on physician. If conscious person give Administer Dexamethason aerosol (Auxiloson, Pulmicort) for inhalation.**SKIN:** Take off soiled clothes. Wash off with plenty of lukewarm water (at least 15 minutes). Consult a doctor in the event of skin reaction.**EYES:** Hold the eyes open and rinse immediately with plenty of lukewarm water (at least 15 minutes). Contact with ophthalmologist.**ALIMENTARY TRACT:** Do not provoke vomiting (risk of choking). Rinse mouth with lukewarm water. Give 1-2 glasses of lukewarm water. Medical help is required.**5. FIRE-FIGHTING MEASURES****FIRE EXTINGUISHING SUBSTANCES:** Powder, foam resistant to alcohols , carbon dioxide, watermist.**SPECIAL HAZARDS:** Under the influence of high temperature or in contact with strong oxidants, acids, basis, metal's salts, copper and copper-alloy could take place polymerization of styrene. Polymerization is strongly exothermic reaction. Fire may cause the generation of carbon monoxide and other toxic gases.**PROTECTIVE EQUIPMENT:** Firemen have to wear self-contained breathing apparatus and protective clothing.**OTHER INFORMATION:** Cool adjacent tanks by spraying water from a safe distance.**6. ACCIDENTAL RELEASE MEASURES****PERSONAL PROTECTION:** Eliminate sources of ignition. Ensure sufficient ventilation in this room. Avoid direct contact with the released substance. Avoid contact with skin and eyes. Put on protective equipment see chapter 8.**PROTECTION OF THE ENVIRONMENT:** Prevent to get through to the sewage system, to the surface water, underground water, to the soil. In case of a major spillage the affected area should be separated with bounds.**ACTION IN CASE OF SPILLAGE:** Seal the container; damaged containers should be placed in emergency containers. Besprinkle spillage, use e.g. mica, wood flour, sand. Remove the substance mechanically and put to emergency containers. For further disposal measures: see chapter 13.

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7. HANDLING AND STORAGE

HANDLING RULES: Keep away from heat and sources of fire. Do not smoke. Do not inhale vapours. Avoid contact with skin and eyes. Take precautionary measures against electrostatic loading. Use only in well ventilated place. Put on protective equipment see chapter 8.

STORAGE: Keep in sealed containers in cool, well ventilated place. Storage in the vicinity of a large quantity of organic peroxides or strong oxidants is prohibited.

USE OF THE PREPARATION: See the technical product data sheet.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

LIMIT VALUES: for styrene CAS 100-42-5 according to:

- *TRGS 900:* MAK: 20ppm, MAK: 86 mg/m³, 2(II),DFG, Y
- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]: TWA 100 mg/m³, 430 mg/m³, STEL 250ppm, 1080 mg/m³

RESPIRATORY TRACT PROTECTION: Gas mask with "A" type absorbing canister.

PROTECTION OF HANDS: Protective gloves suitable for handling solvents (nitrile rubber, viton).

EYES PROTECTION: Protective glasses.

SKIN PROTECTION: Suitable protective clothing (antistatic, impregnated clothing)

WORKPLACE: Topical stays and exhausting ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: highly viscous liquid
Colour: grey
Smell: sweet, penetrating odour (a typical smell of styrene)
pH: --
Boiling point: 146°C
Melting point: -30°C
Flash-point: 30°C
Autoignition point: 490°C
Explosion limits: % lower: 1.1 vol.% upper: 8.0 vol.%
Vapour pressure: 7.3 hPa (20°C)
Density: 0.6 g/cm³ (20°C)
Water solubility: very poor
Viscosity (rotating rheometer): approx. 40000 mPas

10. STABILITY AND REACTIVITY

STABILITY: The product remains stable under normal conditions.

AVOID THE CONTACT OF THE MATERIAL WITH: Strong oxidants, acids, basis, high temperature.

DANGEROUS DECOMPOSITION PRODUCTS: Carbon monoxide and other toxic gasses are generated as a result of thermal decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological studies at the preparation are not available.

TOXICITY(for styrene): LD₅₀ (rat, oral) 5000 mg/kg
LD₅₀ (mouse, oral) 316 mg/kg
LC_{L0} (human, inhalation) 10000 ppm/0.5 hour.

IRRITATING EFFECT: Skin: irritating to skin and mucous membranes.
Eyes: irritating effect.

SYMPTOMS OF POISONING: Headache and vertigo, fatigue, decreased muscle power, sleepiness and, in exceptional instances, loss of consciousness. If swallowed, the substance may cause irritation of the alimentary tract, nausea, vomiting, and diarrhoea. Vapour may cause depression of nervous system.

12. ECOLOGICAL INFORMATION (for styrene)

Ecological studies at the preparation are not available.

Number in catalogue includes substance danger to water : 187

Water hazard class : 2

LC50 Fish 4-10 mg/l/96h

The product is very poorly soluble in water. Keep away from the sewage system, surface water, underground water, and soil.

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13. DISPOSAL CONSIDERATIONS

RECOMMENDATION: Product must be disposed of by special means in accordance with local regulations.

REMAINS OF PRODUCT: Remains of product in the tin should be carefully remove and harden using suitable hardener. Harden product is not harmfully substance and could be treat like plastics wastes (in accordance with the regulations).
code of waste: 08 01 11

ATTENTION: Remains should be harden in small portions far from flammable substances. Much amount of heat is emitting in the time of reaction!

CLEAN TIN: Tin carefully clean is not harmful waste.
code of waste: 15 01 04

TIN PARTLY EMPTY: See remains of product.

14. TRANSPORT INFORMATION

GENERAL INFORMATION: Do not transport with materials class 1 (with the exception of materials class 1.4S) and with some of materials class 4.1 and 5.2. Avoid direct contact with materials class 5.1 and 5.2 in the time of transport. Do not use naked flame and do not smoke.

ADR/RID: UN 1866 RESIN SOLUTIONS, FLAMMABLE, 3, III

UN No.	Name of the raw material	Hazard identification number	Warning label required	Classification Code	Packaging group
1866	RESIN SOLUTIONS, FLAMMABLE	30	3	F1	III

IMDG- Code: RESIN SOLUTIONS, FLAMMABLE, class 3, UN 1866, PG III

EmS: F-E, S-E

ICAO/IATA: No data available.

15. REGULATORY INFORMATION

Safety data sheet in accordance with Directives:

67/548/EWG(2006/121/WE)

91/155/EWG (2001/58/WE)

1999/45/EC (2006/8/WE)

2006/1907/WE REACH

Other regulations: ADR (2007-2009) , IMDG Code 2006 Edition

CONTAINS: Styrene

HAZARD SYMBOL(S)



Xn Harmful

RISK-PHRASES: R10 Flammable.
R20 Harmful by inhalation.
R36/38 Irritating to eyes and skin.

SAFETY-PHRASES: S(2-) Keep out of the reach of children.
S23 Do not breathe vapour.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.
S46 If swallowed, seek medical advice immediately and show this container or label.

16. OTHER INFORMATION

Full text of the R-Phrases from section 2 and 3:

R10Flammable.

R20Harmful by inhalation.

R36/38Irritating to eyes and skin.

Information contained herein is based on our current knowledge. This document does not constitute a warranty for product characteristics.

Issued by: NOVOL Sp. z o.o.

Information: Laboratory Research and Development; tel. +48 61 810 99 09