SAFETY DATA SHEET



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name Synonyms, trade names Part No. In-house No. Applications	CARBOMASTIC 242 PART A 8614-0-048, 8614-0-300 8614 8614 Two oompound epoxy - urethan paint. Refer to MSDS for Part B and technical datasheet.
Supplier	CARBOLINE NORGE AS Postboks 540 3412 LIERSTRANDA NORWAY Tel: 32-857400 Fax: 32-857496
Contact person	e-mail: hms@stonkor.com
Emergency telephones Manufacturer	Poison senter in Norway Phone: +4722591300 CARBOLINE NORGE AS Postboks 593 3412 LIERSTRANDA NORWAY Tel: 32-857300 Fax: 32-857495

2. HAZARDS IDENTIFICATION

Highly flammable. Irritating to eyes. May cause sensitisation by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Futher information about hazards and environmental effects, see section 11 and 12.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS No.	Content	Symbol	R-phrases
4-isocyanatosulphonyltoluene	223-810-8	4083-64-1	1-5 %	Xn	R-14, 36/37/38, 42
butanone	201-159-0	78-93-3	5-10%	Xi ,F	R-11, 36, 66, 67
2-methoxy-1-methylethyl acetate	203-603-9	108-65-6	10-30 %	Xi	R-10, 36
White Spirit < 22% aromates	265-185-4	64742-82-1	5-10 %	Xn ,N	R-10, 55, 56, 51/53, 67
4-METHYL-2-PENTANONE	203-550-1	108-10-1	1-5 %	Xn ,F	R-11, 20, 36/37, 66

See section 16 for explanations to R-phrases

Composition comments

Key to the symbols: Tx= Very toxic, T= Toxic,C= Corrosive, Xn= Harmful, Xi= Irritant, IK= Not classified, E= Explosive, O= Oxidizing, Fx= Extremely flammable, F=Highly flammable, N= Dangerous to the environment,M= Mutagenic, A= Sensitizing, K= Carcinogenic, R= Toxic to reproduction

White Spirit <22% aromates, contains max. 0,01 % Benzen.

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## 4. FIRST AID MEASURES

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| General                  | In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.                                                                                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation               | Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.                                                                                                              |
| Ingestion                | Provide rest, warmth and fresh air. Give water or milk, preferably with active carbon. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention. |
| Skin                     | Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above.                                                                                                    |
| Eyes                     | Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. Make sure to remove any contact lenses from the eyes before rinsing.                                                                                |
| 5. FIRE-FIGHTING MEASURE | S S                                                                                                                                                                                                                                                                                          |
|                          |                                                                                                                                                                                                                                                                                              |

| Extinguishing media                 | Dry chemicals, sand, dolomite etc. Powder, foam or CO2.                                                                                                                    |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Special fire fighting<br>procedures | Avoid water in straight hose stream; will scatter and spread fire. Move container from fire area if it can be done without risk.                                           |
| Specific hazards                    | Generates massive smoke during fire. Solvent vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground to sources of ignition. |
| Protective measures in fire         | Appropriate breathing apparatus may be required.                                                                                                                           |

6. ACCIDENTAL RELEASE MEASURES

| Personal protection      | Wear necessary protective equipment, ref.section 8.                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental protection | Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers or sewage, inform appropriate in accordance with local regulations. Clean preferably whit a detergent; avoid use of solvents.                                                                                                                                                                                                                                                |
| Spill cleanup methods    | Contact Emergency Response Team in case of major spills. Collect with<br>absorbent, non-combustible material into suitable containers. Ventilate well, stop<br>flow of gas or liquid if possible. Remove ignition sources. Do not allow chemical to<br>enter confined spaces such as sewers due to explosion risk. Sewers designed                                                                                                                                   |
| 7. HANDLING AND STORAGE  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Usage precautions        | Wear necessary protective equipment, ref. section 8. Keep away from heat,<br>sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid<br>breathing vapours. Use approved respirator if air contamination is above<br>accepted level. Static electricity and formation or sparks must be prevented. Use<br>explosion proof electric equipment. Containers should be kept tightly closed.<br>Read and follow manufacturer's recommendations. |

Storage precautionsKeep in cool, dry, ventilated storage and closed containers. Containers which are<br/>opened must be carefully resealed and kept upright to prevent leakage.Storage criteriaFlammable liquid storage.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Ingredient name                 | CAS no.                                    | Reference | LT Exp 8 Hrs  | ST Exp 15 Min |
|---------------------------------|--------------------------------------------|-----------|---------------|---------------|
| butanone                        | 78-93-3                                    | WEL.      | 600 mg/m3(Sk) | 899 mg/m3(Sk) |
| 2-methoxy-1-methylethyl acetate | 108-65-6                                   | WEL.      | 274 mg/m3(Sk) | 548 mg/m3(Sk) |
| White Spirit < 22% aromates     | 64742-82-1                                 | WEL       |               |               |
| Ingredient comments             | OES = Occupational Exposure Standard. 2003 |           |               |               |

### **Protective equipment**

OES = Occupational Exposure Standard. 2003



| Process conditions              |                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | ·<br>·                                                                                                                                                                                                                                                                                                                           |
| Ventilation                     | All handling to take place in well-ventilated area. Where reasonably practicable this should be achieved by use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain consentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn. |
| Respirators                     | At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used. Wear respiratory protection with combination filter (dust and gas filter) during spraying operations. Gas cartridge (organic substances).                                                                                  |
| Protective gloves               | Chemically resistent gloves (EN 374). Use protective gloves made of: Viton ${ m I}$ rubber (fluor rubber). Polyvinyl alcohol (PVA).                                                                                                                                                                                              |
| Eye protection                  | -                                                                                                                                                                                                                                                                                                                                |
| Other Protection                | If risk of splashing, wear safety goggles or face shield.                                                                                                                                                                                                                                                                        |
| Hygienic work practices         | Protective clothing as needed. Provide eyewash, quick drench.                                                                                                                                                                                                                                                                    |
| Environmental exposure controls | Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes wet. Use appropriate hand lotion to prevent defatting and cracking of skin.                                                                     |

#### **Environmental exposure** controls -

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance             | Fluid.                               |                        |  |
|------------------------|--------------------------------------|------------------------|--|
| Colour                 | Silver. Reddish.                     |                        |  |
| Odour                  | Solvent.                             |                        |  |
| Solubility description | Soluble in: Organic solvents (most). |                        |  |
| Density (g/cm3)        | 1.23                                 | Temperature (°C)       |  |
| Vapour density (air=1) | > 1                                  |                        |  |
| Viscosity (interval)   | 120 KU                               | Temperature (°C) 25 25 |  |
| Flash point (°C)       | -7                                   | Method                 |  |

| Auto ignition temp. (°C) | 220         |
|--------------------------|-------------|
| Flammability limit (%)   | 0.90 - 11.5 |

**10. STABILITY AND REACTIVITY** 

| Stability<br>Hazardous decomp.<br>products | Avoid: Heat, sparks, flames.<br>Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11. TOXICOLOGICAL INFO                     | RMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Health hazards, general                    | There are no data avaiable on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive and classified for toxicological hazards accordingly. See Section 2 and 15 for details.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Health warnings                            | Inhalation is the main hazard in industrial use. Solvent vapours are hazardous<br>and may cause nausea, sickness and headaches. May cause sensitisation by<br>skin contact, the product contains an high molecular epoxy resin (>700), solved in<br>an organic solvent. Absorbs through the skin. Contact with this chemical may<br>cause: Strong eye irritation, but rarely permanent damage. Skin drying with risk of<br>formation of eczema. Vapour may irritate respiratory system or lungs. Spray mist<br>can irritate airways and lungs. Swallowing concentrated chemical may cause<br>severe internal injury. Prolonged or repeated exposure to this chemical may<br>cause: Brain damage. |
| Medical considerations                     | Chronic solvent-induced symptoms may give untypical (neurasthenically produced) impression of disease.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 12. ECOLOGICAL INFORM                      | ATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ecological information                     | No available environmental data on this product. The product should not be<br>allowed to enter drains or water courses. Environmental data, naphta (netroleum)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Ecological informationNo available environmental data on this product. The product should not be<br/>allowed to enter drains or water courses. Environmental data, naphta (petroleum)<br/>hydrodesulfurized heavy (cas nr. 64742-82-1), LC50 water organism 1-100 mg/l ,<br/>bioaccumulation: log Pow 2-7, readily degradable, toxic to water organism in low<br/>consentration and with short exposure. Environmetal data, 2-Metoksy-1-<br/>Metyletylacetat ( Cas.nr. 108-65-6): Acute LC50 fish, 161 mg/l. LC50 Daphnia<br/>magna, 48h: 408 mg/l. Log Pow is estimated to 0,430. Environmental data<br/>butanone (Cas.nr 78-93-3):Low toxicity to aquatic organism. Readily<br/>degradable.Do not bioaccumulate in aquatic environment.Fish LC50, 96h:<br/>4600-4900 mg/l, Daphnia EC50, 24h: 8900 mg/l, Algae NOEL, 8d: 4300 mg/l. Log<br/>Pow: 1,8-2 . BOD20/ThOD:89%.

## **13. DISPOSAL CONSIDERATIONS**

| Disposal methods | Wastes should be delivered as hazardous waste. Do not allow runoff to sewer, waterway or ground. |
|------------------|--------------------------------------------------------------------------------------------------|
| Waste class      | European Waste Catalogue (EWC): Hazardous waste according to EU-directives. 08 01 11.            |

## 14. TRANSPORT INFORMATION

Label for conveyance

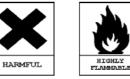


| ROAD TRANSPORT (ADR): |                             |
|-----------------------|-----------------------------|
| UN no. road           | 1263                        |
| ADR class             | Class 3: Flammable liquids. |
| ADR packing group     | II                          |
| RAIL TRANSPORT (RID): |                             |
| RID class no.         | 3                           |
| SEA TRANSPORT (IMDG): |                             |
| UN no. sea            | 1263                        |
| IMDG class            | 3                           |
| IMDG packing group    | II                          |
| EmS no.               | F-E,S-E                     |
| Marine pollutant      | No.                         |
| Trane 5               |                             |

Trans5

## **15. REGULATORY INFORMATION**

### Symbol(s)



| Contains       | butanone<br>4-isocyanatosulphonyltoluene<br>2-methoxy-1-methylethyl acetate                                                                                                                                    |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risk phrases   | R-11 Highly flammable.<br>R-36 Irritating to eyes.<br>R-42 May cause sensitisation by inhalation.<br>R-52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.     |
| Safety phrases | S-16 Keep away from sources of ignition - No Smoking.<br>S-23 Do not breathe gas/fumes/vapour/spray.<br>S-33 Take precautionary measures against static discharges.<br>S-51 Use only in well-ventilated areas. |

## **16. OTHER INFORMATION**

| Explanations to R-phrases in section 2                      | R-14 Reacts violently with water. R-36/37/38 Irritating to eyes, respiratory system<br>and skin.R-42 May cause sensitisation by inhalation.R-11 Highly flammable.R-36<br>Irritating to eyes.R-66 Repeated exposure may cause skin dryness or<br>cracking.R-67 Vapours may cause drowsiness and dizziness.R-10<br>Flammable.R-65 Harmful: may cause lung damage if swallowed.R-51/53 Toxic to<br>aquatic organisms, may cause long-term adverse effects in the aquatic<br>environment.R-20 Harmful by inhalation.R-36/37 Irritating to eyes and respiratory<br>system.                                                         |  |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| * Information revised since the previous version of the SDS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| User notes:                                                 | Mixing ratio. A:B=4:1<br>The information in this safety-data sheet is based on the present state of our knowledge and on current EU and national laws. The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this SDS is meant as a description of the safety requirements of our product: it is not to beconsidered as a guarantee of the products' properties. |  |
|                                                             | Star Maling- og Lakkfabrikk A/S and Carboline Norge A/S is a member of " Grønt<br>Punkt Norge AS" For more information see; www.grontpunkt.no.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Issued by                                                   | STAR MALING OG LAKKFABRIKK A/S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| Revision date                                               | 2008-11-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| Rev. no./repl. SDS generated                                | 2006-07-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| Date                                                        | 2008-11-28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| Signature                                                   | I.V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Printing date:                                              | 2010-02-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |