



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

SDS n° : FP17366

NORSODYNE H 23100 TA

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

Product identifier

Product name NORSDYNE H 23100 TA
Chemical Name Unsaturated polyester resin
Pure substance/mixture Mixture

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

Sector of use Resins for composites, Contact us before using for food contact application.

Details of the supplier of the safety data sheet

Supplier CCP Composites UK Ltd
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STALLINGBOROUGH, NORTH EAST LINCS. DN41 8DR
UNITED KINGDOM
Tel: +44 (0) 1469 572464
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For further information, please contact

E-mail address Rccp.SDSmanagement@ccpcomposites.com
Internet Address <http://www.ccpcomposites.com>

Emergency telephone number

This telephone number is available 24 hours per day, 7 days per week.	
Europe, America, Middle East, Africa (European language countries) :	+44 (0) 1235 239 670
Middle East/Africa (Arabic speaking countries) :	+44 (0) 1235 239 671
Asia Pacific :	+65 3158 1074

2. HAZARDS IDENTIFICATION

The mixture is classified as dangerous in accordance with Directive 1999/45/EC.

Classification of the substance or mixture

Symbol(s) Xn - Harmful
Classification R10 - Xn;R48/20 - Xn;R20 - Xi;R36/37/38

Label elements

contains Styrene

Symbol(s) Xn - Harmful

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**R-phrases(s)**

R10 - Flammable

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

R20 - Harmful by inhalation

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

S-phrases(s)

S16 - Keep away from sources of ignition - No smoking

S23 - Do not breathe vapour

S33 - Take precautionary measures against static discharges

S38 - In case of insufficient ventilation, wear suitable respiratory equipment

S42 - During fumigation/spraying wear suitable respiratory equipment

S51 - Use only in well ventilated areas.

S 7/9 - Keep container tightly closed and in a well-ventilated place.

Special labelling of certain mixtures

contains phthalic anhydride. May produce an allergic reaction.

Other hazards**Environmental properties**

Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	EC-No	REACH Registration Number	CAS-No	Weight percent	Classification (67/548)	GHS Classification
Styrene	202-851-5	01-2119457861-3 2	100-42-5	~ 40	R10 Xn; R20 Xn; R48/20 Xn; R65 Xi; R36/37/38	Flam. Liq. 3 (H226) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) STOT SE 3 (H335) STOT RE 1 (H372) Asp. Tox. 1 (H304)
phthalic anhydride	201-607-5	01-2119457017-4 1	85-44-9	< 1	Xn; R22 Xi; R37/38 Xi; R41 R42/43	Acute Tox. 4 (H302) STOT SE 3 (H335) Resp. Sens. 1 (H334) Eye Dam. 1 (H318) Skin Irrit. 2 (H315) Skin Sens. 1 (H317)

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Description of first aid measures**Eye Contact**

Rinse thoroughly with plenty of water, also under the eyelids

Keep eye wide open while rinsing

If symptoms persist, call a physician

Skin contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes

If skin irritation persists, call a physician

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Inhalation Move to fresh air
If not breathing, give artificial respiration
If symptoms persist, call a physician

Ingestion Do NOT induce vomiting
Rinse mouth
If symptoms persist, call a physician

Protection of first-aiders Use personal protective equipment

Most important symptoms/effects, acute and delayed

Eye Contact Irritating to eyes

Skin contact Irritating to skin

Inhalation Harmful by inhalation
Harmful: danger of serious damage to health by prolonged exposure through inhalation
Irritating to respiratory system

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Indication of immediate medical attention and special treatment needed, if necessary

General advice If symptoms persist, call a physician
Show this safety data sheet to the doctor in attendance
Do not breathe dust/fume/gas/mist/vapours/spray

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Cool containers / tanks with water spray, Dry chemical, Foam, Carbon dioxide (CO₂)

Extinguishing Media Which Must not be Used for Safety Reasons Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases Vapours may form explosive mixtures with air
Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks)

Precautions for fire-fighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit.

Other information Cool containers / tanks with water spray
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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Personal precautions

Remove all sources of ignition
Heat, flames and sparks
Take precautionary measures against static charges
Ensure adequate ventilation
Use personal protective equipment

Environmental precautions**Environmental precautions**

The product should not be allowed to enter drains, water courses or the soil
Do not flush into surface water or sanitary sewer system

Methods and materials for containment and cleaning up**Methods for cleaning up**

Contain spillage, and then collect with non-combustable absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13)
Use clean non-sparking tools to collect absorbed material

Reference to other sections

See Section 12 for additional Ecological Information

7. HANDLING AND STORAGEPrecautions for safe handling**Precautions for safe handling**

Avoid static electricity build up with connection to earth
Use only in area provided with appropriate exhaust ventilation
In case of insufficient ventilation, wear suitable respiratory equipment
Do not eat, drink or smoke when using this product
Wear personal protective equipment

Prevention of fire and explosion

Keep away from open flames, hot surfaces and sources of ignition Do not use compressed air for filling, discharging or handling. Empty containers may contain flammable or explosive vapours

Hygiene measures

When using, do not eat, drink or smoke
Provide regular cleaning of equipment, work area and clothing

Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

Keep in a dry, cool and well-ventilated place
Keep at temperature not exceeding 30°C
Keep away from heat and sources of ignition.

Materials to avoid

Strong oxidizing agents, Peroxides

Packaging material

metallic GRP Tanks (Reinforced Glass Polyester)

Unsuitable materials for containers Aluminium copper Copper alloys

Specific use(s)**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters**Occupational Exposure limits**

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Chemical Name	European Union	The United Kingdom	Ireland
Styrene 100-42-5	-	STEL 250 ppm STEL 1080 mg/m ³ TWA 100 ppm TWA 430 mg/m ³	TWA 20 ppm TWA 85 mg/m ³ STEL 40 ppm STEL 170 mg/m ³
phthalic anhydride 85-44-9		STEL 12 mg/m ³ TWA 4 mg/m ³ Sen+	TWA 4 mg/m ³ STEL 12 mg/m ³ Sensitizer

Legend:

+	Sensitisers
*	Skin designation
**	Hazard Designation
C:	Carcinogen
M:	Mutagen
R:	Toxic to reproduction

Biological standards

Chemical Name	European Union	The United Kingdom	Ireland
Styrene 100-42-5	-	We are not aware of any national exposure limit.	We are not aware of any national exposure limit.

Exposure controls**Occupational exposure controls****Engineering measures**

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal protective equipment**General Information**

Use personal protective equipment.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment. Breathing apparatus with filter. Type A.

Eye protection

Safety glasses with side-shields Do not wear contact lenses

Skin and body protection

Antistatic boots. Wear fire/flammable resistant/retardant clothing.

Hand protection

Impervious gloves Glove material : Neoprene Nitriles Viton (R) Polyvinyl alcohol
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Environmental exposure controls

Environmental exposure controls Do not allow material to contaminate ground water system.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<u>Property</u>	<u>Values</u>	<u>Remark</u>
Appearance	amber	
Physical state	Liquid	
Particle size		no data available
Odour	Styrene	

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Odour Threshold		no data available
pH		no data available
pH (as aqueous solution)		no data available
Melting point/range		no data available
Freezing point		no data available
Boiling point		no data available
Flash point	31 °C	
Evapouration rate		no data available
Flammability Limits in Air		
upper	-	
lower	-	
Vapour pressure	6 hPa	20°C
Vapour density		no data available
Density	1.09 g/cm3	20°C
Water solubility	Insoluble in water	
Partition coefficient: n-octanol/water		no data available
Autoignition temperature		no data available
Decomposition temperature		no data available
Viscosity	450 - 650 mPa.s	23°C
Explosive properties		no data available
Oxidizing properties		no data available

Other information

<u>Property</u>	<u>Values</u>	<u>Remark</u>
Solubility in other solvents	Soluble in most organic solvents	

10. STABILITY AND REACTIVITY

Reactivity**Reactivity** No information availableChemical stability**Stability** Stable under recommended storage conditions.Possibility of hazardous reactions**Hazardous polymerisation** Polymerisation can occur.Conditions to avoid**Conditions to avoid** Heat, flames and sparks
Exposure to light
Take precautionary measures against static charges.Incompatible materials**Materials to avoid** Strong oxidizing agents, PeroxidesHazardous decomposition products**Hazardous decomposition products** Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity - Product Information

Inhalation Harmful by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to respiratory system.**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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Local effects

Inhalation

Harmful by inhalation Harmful: danger of serious damage to health by prolonged exposure through inhalation Irritating to respiratory system

Skin contact

Irritating to skin

Eye Contact

Irritating to eyes

Sensitisation

Inhalation

May produce an allergic reaction.

Skin contact

May produce an allergic reaction.

Chronic toxicity

Target Organ Effects

Central nervous system (CNS). Reproductive System. Respiratory system. Eyes. Liver. Skin.

Specific effects

Carcinogenicity

Animal testing did not show any carcinogenic effects.

Mutagenic Effects

Animal testing did not show any mutagenic effects

Reproductive toxicity

Animal testing did not show any effects on fertility

Developmental Toxicity

Animal studies did not show statistically significant developmental toxicological effects.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Styrene	> 2000 mg/kg (Rat)		11.8 mg/L (Rat) 4 h
phthalic anhydride	1530 mg/kg bw (Rat)	> 3160 mg/kg bw (Rabbit)	2.14 mg/L (Rat) 4 h

12. ECOLOGICAL INFORMATION

Toxicity

Do not flush into surface water or sanitary sewer system.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Styrene 100-42-5	LC50 Algae 72h 4.9 mg/L	EC50 Daphnia magna 48h 4.7 mg/L	LC50 Fish 96h 4.02 - 10 mg/L	
phthalic anhydride 85-44-9		EC50 Daphnia magna 48h > 640 mg/L	LC50 Fish 7d 560 mg/L (Brachydanio rerio)	

Persistence and degradability

No information available.

Bioaccumulative potential**Partition coefficient:
n-octanol/water**

Chemical Name	log Pow
Styrene - 100-42-5	3
phthalic anhydride - 85-44-9	1.6

Mobility in soil

No information available.

Results of PBT and vPvB assessment

No information available.

Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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Waste from Residues/Unused Products	Dispose of in accordance with the European Directives on waste and hazardous waste.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Other information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION

ADR/RID

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III
Classification Code	F1
Tunnel restriction code	(D/E)
ADR Hazard Id (Kemmler Number)	30
Description	UN1866, RESIN SOLUTION, 3, PG III, (D/E)
Limited quantity	LQ7

IMDG/IMO

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III
Marine pollutant	NP
EmS	F-E, S-E
Description	UN1866, RESIN SOLUTION, 3, PG III, (31°C c.c.)
Limited quantity	5 L

ICAO/IATA

UN-No	UN1866
Hazard class	3
Packing group	III
ERG Code	3L
Description	UN1866, RESIN SOLUTION, 3, PG III
Limited quantity	10 L

ADN

UN-No	UN1866
Hazard class	3
Packing group	III
Classification Code	F1
Special Provisions	640E
Description	UN1866, RESIN SOLUTION, 3, PG III
Limited quantity	LQ7
Ventilation	VE01

15. REGULATORY INFORMATION

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The mixture is classified as dangerous in accordance with Directive 1999/45/EC.

Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Chemical Name	96/82/EC (SEVESO) - §9	96/82/EC (SEVESO) - §6, §7
Styrene - 100-42-5	50000	5000 tonne 50000 tonne

National regulatory information**The United Kingdom**

Avoid exceeding of the given occupational exposure limits (see section 8).

Ireland

Avoid exceeding of the given occupational exposure limits (see section 8).

Chemical Safety Assessment

No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R10 - Flammable

R20 - Harmful by inhalation

R65 - Harmful: may cause lung damage if swallowed

R41 - Risk of serious damage to eyes

R22 - Harmful if swallowed

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

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

R42/43 - May cause sensitisation by inhalation and skin contact

R37/38 - Irritating to respiratory system and skin.

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Revision Note not applicable.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet