

SAFETY DATA SHEET

VERSION OF: 18th September 2002

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REVISION 1

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME

NORSODYNE ORTHO UNSATURATED POLYESTER RESIN
Cobalt Accelerated

INTENDED USE AREA

PRODUCTION OF FIBRE REINFORCED COMPOSITES

SUPPLIER OR COMPANY NAME

CRAY VALLEY LTD.

FULL ADDRESS

LAPORTE ROAD,
STALLINGBOROUGH,
NORTH EAST LINCOLNSHIRE,
DN41 8DR.

TELEPHONE

++ 44 (0) 1469 551035

FAX

++ 44 (0) 1469 571007

EMERGENCY TELEPHONE NUMBER

++ 44 (0) 1469 572464

2. COMPOSITION / INFORMATION ON INGREDIENTS

PREPARATION

CHEMICAL NAME OR GENERIC NAME

Unsaturated Polyester Resin in Styrene

COMPONENTS OR IMPURITIES CONTRIBUTING TO HAZARDS

<u>Styrene</u>	Typical Concentration Range	40 – 45 %		
Symbols	Risk Phrases	Safety Phrases	EINECS No	CAS No
Xn	R10, R20, R36/R38	S23	601-026-00-0	100-42-5
<u>Cobalt Octoate</u>	Typical Concentration Range	0.1-0.2%		
	Risk Phrases	Safety Phrases	EINECS No	CAS No
	R43		205-250-6	136-52-7
<u>Phthalic Anhydride</u>	Typical Concentration Range	0.1-0.2%		
	Risk Phrases	Safety Phrases	EINECS No	CAS No
	R42/43		607-009-00-4	85-44-9

3. HAZARDS IDENTIFICATION

SPECIFIC HAZARDS

Harmful by inhalation. Irritating to eyes and skin.

PHYSICAL AND CHEMICAL HAZARDS

Flammable

Strongly exothermic polymerisation may be initiated by heat, peroxides or other free radical generators.

STRUCTURAL RESINS DEPARTMENT, LAPORTE ROAD, STALLINGBOROUGH,
NORTH EAST LINCOLNSHIRE, DN37 8DR, ENGLAND.

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NOROSDYNE CLEAR POLYESTER RESIN

4. FIRST AID MEASURES

INHALATION

Remove patient from affected area and make rest.
Give oxygen in case of breathing difficulty.
Call emergency medical care.

SKIN CONTACT

Wash thoroughly with soap and water. Remove all contaminated clothing.

EYE CONTACT

Wash immediately (15 mins) with water, opening eyelids.
Call emergency medical care.

INGESTION

Do NOT induce vomiting, seek immediate medical advice.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA SUITABLE

Carbon dioxide / Foam / Powder

NOT SUITABLE

Water.

PROTECTION OF FIRE FIGHTERS

Wear individual breathing apparatus

SPECIFIC HAZARDS

Formation of toxic products on combustion including carbon monoxide

SPECIFIC METHODS

Cool the container with sprayed water to avoid polymerisation

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective equipment: Gloves-Goggles-Boots
Avoid inhaling vapours: Wear self-contained breathing apparatus

ENVIRONMENTAL PRECAUTIONS

Do not discharge into sewers / Do not allow entry to the environment
If the product contaminates water-courses, inform the Environment Agency

METHODS OF CLEANING UP

RECOVERY

Recover product by fixing with an absorbent.
Collect the product in a container pending future destruction

DISPOSAL

Burn in an approved installation

INCOMPATIBLE MATERIALS

Wood, sawdust

7. HANDLING AND STORAGE

HANDLING

Do not store beyond shelf life

PREVENTION OF WORKER EXPOSURE

Efficient ventilation is required in the working area. Collect emissions at source

NO SMOKING

PREVENTION OF FIRE AND EXPLOSION

Take precautionary measures against static discharges
Close containers after use.

STORAGE

Stable under normal storage conditions.

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STORAGE CONDITION SUITABLE

Keep container tightly closed in a cool, well ventilated location

STORAGE CONDITION TO AVOID

Keep container out of sunlight.

Keep away from heat.

Keep away from sources of ignition - NO SMOKING.

INCOMPATIBLE MATERIALS

Keep container away from oxidising materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS (MEL - TWA, MEL - STEL)

Product Name

Styrene

8 hours (MEL – TWA)

ppm mg/m²

100 420

Short Period (MEL – TWA) (UK HSE EH 40)

ppm mg/m²

250 1050 (15 mins)

PERSONAL PROTECTIVE EQUIPMENT (Ref. CEN Dir. 89/686)

RESPIRATORY PROTECTIVE EQUIPMENT

Do not breathe vapours

In case of insufficient ventilation, wear suitable respiratory equipment.

HAND PROTECTION

Wear solvent-proof gloves

EYE PROTECTION

Wear a face-shield or chemical goggles. Contact lenses should not be worn.

SKIN AND BODY PROTECTION

Wear impermeable apron.

SPECIFIC HYGIENE MEASURES

When using do not eat, drink or smoke

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

PHYSICAL STATE

Viscous Liquid

COLOUR

Refer to Technical Data Sheet

ODOUR

Aromatic

SPECIFIC TEMPERATURES

BOILING POINT OR RANGE

≥145°C

RISK OF FIRE OR EXPLOSION

FLASH POINT

31 °C (EN 22719)

AUTO IGNITION TEMPERATURE

490°C

EXPLOSIVE OR FLAMMABLE LIMITS IN AIR / %

Lower

Upper

1.1

6.1

VAPOUR PRESSURE

6.52 mb (652N/M²) at 20 °C

DENSITY

RELATIVE DENSITY (WATER)

1.05 - 1.2 (Typical Values)

SOLUBILITY

IN WATER

Insoluble in water.

IN ORGANIC SOLVENTS

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Soluble in aromatic solvents.
Soluble in aliphatic solvents.
TYPICAL VISCOSITY 1.0 – 10.0 Poise (@ 20°C)

10. STABILITY AND REACTIVITY

STABILITY

Stable under normal storage conditions.

CONDITIONS TO AVOID

Light / Heat / Sources of ignition

HAZARDOUS REACTIONS WITH

Exothermic polymerisation may occur with strong oxidising agents / peroxides

11. TOXICOLOGICAL INFORMATION

SKIN IRRITATION

Irritating to the skin.

EYE IRRITATION

Irritating to the eyes.

INHALATION

Harmful by inhalation

Specific symptoms include headaches, dizziness, tiredness

12. ECOLOGICAL INFORMATION

PERSISTENCE / DEGRADABILITY

Styrene is readily biodegradable.

POSSIBLE ENVIRONMENTAL IMPACT / ECOTOXICITY

Do not discharge into drains or the environment, dispose at an authorised waste collection point

13. DISPOSAL CONSIDERATIONS

MEASURES FOR DISPOSAL

Incineration in approved installation for liquid resin

Crushing then incineration when high solid proportion

DESTROYING PROCEDURE OF CONTAMINATED PACKAGING

Cleaned packaging may be recycled.

Contaminated packaging must be disposed of as hazardous waste

14. TRANSPORT INFORMATION

INTERNATIONAL REGULATION

SEA (IMDG)

Proper shipping name	Resin Solution, Flammable
UN No	1866
Class	3
EMS No	3 - 05
MFAG	310
Marine Pollutant (P or PP)	
Remark	

AIR (ICAO / IATA)

UN / ID No	1866
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NOROSDYNE CLEAR POLYESTER RESIN

Proper shipping name Resin Solution, Flammable
Class / Division 3
Subsidiary Risk
Remark

LAND (RID/ADR, RTMDR/RTMDF)

Transport name Resin Solution, Flammable
Class 3
Item
Hazard identification No
Substance identification No
Remark

15. REGULATORY INFORMATION

EU LABELLING

R Phrases

R10 Flammable
R20 Harmful by Inhalation
R36/38 Irritating to eyes and skin

S Phrases

S23 Do not breathe vapours
S36/37/39 Wear suitable protective clothing, gloves and eye protection

Symbols

Xn Harmful
F Flammable

Contains phthalic anhydride
Contains cobalt octoate
May produce an allergic reaction

UK / EU REGULATION

Chemicals Hazard Information & Packaging for Supply (1993, 1994, 2002)
Dangerous Substances Directive 2001/59 (28th Adaptation)
Dangerous Preparations Directive 1999/45, 2001/60

16. OTHER INFORMATION

RISK PHRASES

R10 Flammable
R20 Harmful by Inhalation
R36/38 Irritating to eyes and skin

REMARK

The information included in this Safety Data Sheet is accurate to the best of our knowledge at the time of compilation.

Further information pertaining to the use of this material may be obtained from the Technical Data Sheet, Applications Manual or alternatively from Cray Valley (Stallingborough) Technical Service Department.

Data sheet conforms with EU SDS Directives 91/155, 93/112, 2001/58.