

SDS Reference CA4595
Version No. 2
Revision Date 26/06/2013
Origination Date 21/12/2010

Safety Data Sheet



CLASSIFIED IN ACCORDANCE WITH CLP/GHS

Product Name RELY T-25A

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

Product Identifier RELY T-25A
CAS No. Not applicable EC No. Not applicable Index No. Not applicable

Synonym (s) None

REACH Registration Number Not applicable

Relevant identified uses and uses advised against
Industrial and Professional:
Puncture-proofing pneumatic tyres for low speed applications.
Consumer:
Not applicable.
Avoid any use:
Restricted to industrial and professional use.

Details of the supplier
Carpenter Ltd
Dinting Lodge Industrial Estate
Glossop Telephone +44 (0) 1457 861141
Derbyshire, SK13 6LE

e-mail address david.nield@carpenter.com

Emergency Telephone number +44 (0) 1457 861141

SECTION 2. HAZARDS IDENTIFICATION

Classification (EC 1272/2008)
3.1 — Acute toxicity (inhal.), Hazard Category 4
3.4 — Sensitisation — Respirat., Hazard Category 1
3.4 — Sensitisation — Skin, Hazard Category 1
3.6 — Carcinogenicity, Hazard Category 1B
3.7 — Reproductive toxicity, Hazard Category 2
4.1 — Hazardous to the aquatic environment — Chronic Hazard Category 1

Classification (1999/45/EC)
CARC. CAT.2 R45
TOXIC R23
HARMFUL R42/43, R63, R66
DANGEROUS FOR THE ENVIRONMENT R50/53

Label Elements:



Signal Word

DANGER

Hazard Statements

H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

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SECTION 2. HAZARDS IDENTIFICATION

Precautionary Statements	P202 P260 P273 P281 P304+P341 P308+P313 P501	Do not handle until all safety precautions have been read and understood. Do not breathe fumes and vapours. Avoid release to the environment. Use personal protective equipment as required. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Dispose of contents/container in accordance with national regulation.
Supplemental information	During blending operation, TDI reacts and the resulting free NCO content is less than 3%.	
Other hazards	Not classified for PBT and vPvB, based on the assessment carried out according to Annex XIII of REACH regulation.	

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No	EC No	REACH Reg No		Classification	Conc'n %
Residues (petroleum), catalytic reformer fractionator residue distillation	64741-67-9	265-069-3	01-2119488737-18	Dgr	GHS08 H332 3.1/4 H350 3.6/1B H361 3.7/2 H373 3.9/2 GHS09 H410 4.1/1	60-70
				T	R45 Carc. Cat. 2	
				Xn	R20, 48/21, 63, 66	
				N	R50/53	
* 2,4-/2,6-Toluene di-isocyanate	26471-62-5	247-722-4	01-2119454791-34	Dgr	GHS06 H331 3.1/3 GHS08 H317 3.4/1 H334 3.4/1 H351 3.6/2	<7
				T	R23	
				Xn	R40, 42/43	

Other components are either not classified or are below the concentration limit for classification

Further information *CONTAINS A SUBSTANCE WITH AN OCCUPATIONAL EXPOSURE LIMIT.
 Key to abbreviations, hazard statements and risk phrases in Section 16

SECTION 4. FIRST AID MEASURES

Description of first aid measures	Take measures to avoid further contamination or contact and move contaminated patient(s) out of the dangerous area.
Inhalation	If inhaled, provide fresh air, warmth and rest and SEEK MEDICAL ADVICE.
Skin contact	Clean areas of skin affected with soap and plenty of water and SEEK MEDICAL ADVICE.
Eye contact	In case of contact with eyes, rinse immediately with plenty of water until irritation subsides. If necessary, seek medical advice.
Ingestion	If product is swallowed, do NOT induce vomiting. Drink plenty of water and if necessary seek medical advice. Show the product label or this safety data sheet.
Most important symptoms and effects, both acute and delayed	Pre-existing sensitisation of skin and/or respiratory tract may be activated at low levels of exposure. The product may irritate the respiratory tract and may cause skin and/or respiratory sensitisation in any individuals exposed to the product.

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SECTION 4. FIRST AID MEASURES

Indication of any immediate medical attention and special treatment needed Obtain immediate medical assistance in case of large-scale exposure.

SECTION 5. FIRE FIGHTING MEASURES

General hazard THE PRODUCT IS A COMBUSTIBLE LIQUID.

Extinguishing media To suit local surroundings (e.g. carbon dioxide, foam, chemical powder)

Extinguishing media not to be used Water.

Special hazards arising from the substance or mixture Decomposition products released in a fire, (e.g. oxides of carbon and nitrogen, hydrogen cyanide), should be considered toxic if inhaled.

Advice for fire-fighters Wear self-contained breathing apparatus and a chemical resistant suit.
Cool endangered containers with water (to prevent container explosion).
Avoid run-off water entering the drains (e.g. use barriers).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Remove all sources of ignition - NO SMOKING!
Adhere to personal protective measures and wear personal protective equipment.
Stop the spillage or leak if the operation does not pose risks. If not, evacuate area.
Ventilate area well after a release.

Environmental precautions Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.

Methods and materials for containment and cleaning up Take up with absorbent material, e.g. sand, sawdust, into tightly closable containers. Label container and dispose of as prescribed.
Dispose of wastes safely.

Reference to other sections Section 8 – personal protective measures.
Section 13 – disposal of waste.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Handle in accordance with good hygiene and safety practice.
Remove all sources of ignition - NO SMOKING! Take precautionary measures against static discharges, use bonding and/or grounding procedures.
Use only in well ventilated areas.

Conditions for safe storage, including any incompatibilities Ensure adequate ventilation of the storage area.
Keep containers tightly closed, cool and dry.
Keep away from strong oxidising agents, water, alcohol, ammonia, amines and alkalis.

Specific end use(s) Industrial and Professional:
Ensure safe systems of work or equivalent arrangements are in place to manage risks.
Refer to the Rely operators' manual.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters Monitoring of the workplace should be considered in accordance with Community Exposure Limits or other data as indicated below.

LTTEL (8 hour TWA):	- ppm	0.02	mg/m ³	WEL data for isocyanates (all as NCO) EH40 (2005) Sen
STEL (15min)	- ppm	0.07	mg/m ³	WEL data for Isocyanates (all as NCO) EH40 (2005) Sen
TLV (8 hour TWA):	0.005 ppm	-	mg/m ³	ACGIH 2009 data for 2,4-/2,6-toluene di-isocyanate
Acute		0.14	mg/m ³	DNEL systemic, inhalation data for 2,4-/2,6-toluene di-isocyanate
Long-term:		0.035	mg/m ³	DNEL systemic, inhalation data for 2,4-/2,6-toluene di-isocyanate
Acute		0.14	mg/m ³	DNEL local, inhalation data for 2,4-/2,6-toluene di-isocyanate
Aqua (freshwater)		0.0125	mg/L	PNEC data for 2,4-/2,6-toluene di-isocyanate
Aqua (marine water):		0.00125	mg/L	PNEC data for 2,4-/2,6-toluene di-isocyanate
Aqua (intermittent releases)		0.125	mg/L	PNEC data for 2,4-/2,6-toluene di-isocyanate
STP		1	mg/L	PNEC data for 2,4-/2,6-toluene di-isocyanate
Soil		1	mg/kg soil dw	PNEC data for 2,4-/2,6-toluene di-isocyanate

Sen: Capable of causing occupational asthma.

Engineering controls

Provide local exhaust ventilation.

Personal protection

Observe normal standards for handling carcinogenic substances.
 Do not breathe vapour.
 Avoid eye and skin contact.
 Wash thoroughly after handling (shower if necessary). Store working clothes separately.
 Do not eat, drink or smoke in the working area.
 In view of possible sensitisation effects, it is recommended that personnel with a medical history of sensitisation do not handle this product.
 Wear personal protective equipment appropriate to the task (see below).

Eye protection

Safety goggles.

Skin protection

PVA gloves.
 Protective overalls.

Respiratory protection

Respirator or self-contained breathing apparatus (if ventilation is insufficient).

Other personal protection

Access to washing facilities.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Environmental exposure controls Do not allow to get into waste water or waterways.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical form Viscous liquid

Colour Dark brown

Odour Petroleum

Odour threshold Not available

Molecular weight Not applicable

Molecular formula Not applicable

pH Not applicable

Melting pt / range Not available

Boiling pt / range >150°C

Flash point 151°C (PMCC)

Relative Evaporation Rate (n-Butyl Acetate = 1) Not available

General Flammability COMBUSTIBLE

Flammability/explosive limits Lower Flammability Limit: 0.6 % (v/v), Upper Flammability Limit: 8.0 % (v/v) (data for residues (petroleum))

Vapour pressure Not available

Vapour Density Not available

Relative Density 1.02-1.06

Solubility Immiscible with water. (2,4/2,6-toluene di-isocyanate reacts.)
Miscible with organic solvents.

Partition coefficient (log P or log K n-octanol / water) 3.43 @22°C (data for 2,4/2,6-toluene di-isocyanate)

Auto-ignition temperature 250°C (data for residues (petroleum))

Decomposition temperature Not available

Viscosity 200-500cps @ 25°C

Explosive properties Not applicable, based on structure.

Oxidising properties Not applicable, based on structure.

Other information None reported.

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SECTION 10. STABILITY & REACTIVITY

Reactivity	May polymerise at high temperatures.
Chemical stability	Stable under normal conditions of handling and storage.
Possibility of hazardous reactions	Potentially violent polymerisation reaction with bases and acyl chlorides. Reacts violently with water releasing carbon dioxide, accelerated by alkalis, amines and some metal compounds.
Conditions to avoid	Temperatures above 50°C.
Incompatible materials	Strong oxidising agents, water, alcohol, ammonia, amines and alkalis. .
Hazardous decomposition products	None reported.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects	No data are available for the product, but residues (petroleum), catalytic reformer fractionator has moderate potential to evoke photoirritation.			
Acute toxicity - oral	LD ₅₀ rat (oral)	>2000 mg/kg	OECD Guideline 401	Data for 2,4-toluene di-isocyanate
	LD ₅₀ rat (oral)	>5000 mg/kg/bw	OECD Guideline 401	Data for residues (petroleum), catalytic reformer fractionator
Acute toxicity - inhalation	LC ₅₀ rat (inhal)	99.68 mg/m ³ /4H	RTECS CZ6300000	Data for 2,4-toluene di-isocyanate
	LC ₅₀ rat (inhal)	4100 mg/m ³ /4H		Data for residues (petroleum), catalytic reformer fractionator
Acute toxicity - dermal	LD ₅₀ rabbit (skin)	>9400 mg/kg	RTECS CZ6300000	Data for 2,4-toluene di-isocyanate
Skin corrosion/irritation	Product may cause skin irritation.			
	Skin, rabbit, 500 mg open irritation test	SEVERE	RTECS CZ6300000	Data for 2,4-toluene di-isocyanate
Serious eye damage/irritation	Product may cause eye irritation.			
	Eye, rabbit, 100 mg	SEVERE	RTECS CZ6300000	Data for 2,4-toluene di-isocyanate
Respiratory sensitisation	Product classified for respiratory sensitisation due to presence of 2,4- and 2,6-toluene di-isocyanates.			
Skin sensitisation	Product classified for skin sensitisation due to presence of 2,4- and 2,6-toluene di-isocyanates.			
CMR effects	Carcinogenicity: classification of product as a carcinogen in accordance with European Regulations.			
	Mutagenicity: data available for 2,4-toluene di-isocyanate and residues (petroleum), catalytic reformer fractionator but insufficient for classification.			
	Reproductive toxicity: data available for residues (petroleum), catalytic reformer fractionator but insufficient for classification.			
Single dose toxicity	No data available.			

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SECTION 11. TOXICOLOGICAL INFORMATION

Repeated dose toxicity	Lowest published toxic concentration, rat, inhalation: 26 ppm/6 hour/5 week- intermittent (data for 2,4-toluene di-isocyanate, RTECS CZ6300000) NOAEL for systemic toxicity = 1.06 mg/kg bw/d (both sexes); NOAEL for local effects (skin irritation) = 106 mg/kg bw/d (males); NOAEL for local effects (skin irritation) = 53 mg/kg bw/d (males) (Data for residues (petroleum), catalytic reformer fractionator)
Aspiration hazard	None reported.
Adverse health effects and symptoms	Irritation to eyes, nose, throat and respiratory tract. Skin and respiratory sensitisation. Difficulty in breathing, coughing and asthma are signs of hypersensitivity. May have serious long-term effects.
Other information	None reported.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity	The product is insoluble in water and will spread on the water surface. There are no data available for the product and limited data available for the ingredients. 2,4-/2,6-toluene di-isocyanate reacts with water forming carbon dioxide and an insoluble, inert and non-degradable product.		
Fish, acute	LC ₅₀ <i>Oncorhynchus mykiss</i> 133 mg/l/96H	OECD Test Guideline 203	Data for 2,4-/2,6-toluene di-isocyanate
	LL ₅₀ <i>Oncorhynchus mykiss</i> 79 mg/l/96H	OECD Test Guideline 203	Data for residues (petroleum), catalytic reformer fractionator
Fish, chronic	NOEL <i>Oncorhynchus mykiss</i>		
Invertebrates	EC ₅₀ <i>Daphnia magna</i> 12.5 mg/l/48H	OECD Test Guideline 202	Data for 2,4-/2,6-toluene di-isocyanate
	EL ₅₀ <i>Daphnia magna</i> 0.22 mg/l/48H	OECD Test Guideline 202	Data for residues (petroleum), catalytic reformer fractionator
Algae	IC ₅₀ <i>Skeletonema costatum</i> 3230 mg/l/96H	OECD Test Guideline 201	Data for 2,4-/2,6-toluene di-isocyanate
	EC ₅₀ <i>Pseudokirchnerella subcapitata</i> 0.32 mg/l/72H	OECD Test Guideline 201	Data for residues (petroleum), catalytic reformer fractionator
Soil organisms	Data not available.		
Micro-organisms	EC ₅₀ activated sludge >100 mg/l/3H	OECD Test Guideline 209	Data for 2,4-/2,6-toluene di-isocyanate
	LL ₅₀ <i>Tetrahymena pyriformis</i> >1000 mg/l/72H	NOEL	Data for residues (petroleum), catalytic reformer fractionator
Other organisms	Data not available.		
Persistence and degradability	No data available for product.		
	Biodegradation 0%, 28days (not degradable)	OECD Test Guideline 302C	Data for 2,4-/2,6-toluene di-isocyanate
Bioaccumulative potential	No data available for product.		
Mobility in soil	No data available for product.		
Results of PBT and vPvB assessment	Not classified, based on the assessment carried out according to Annex XIII of REACH regulation.		
Other adverse effects	None reported.		

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SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Dispose of waste in accordance with national (i.e. Hazardous Waste Regulations) and local authority regulations.
Do not allow product to get into waste water or waterways.
Return empty containers to supplier or treat in the same way as the product.

SECTION 14. TRANSPORT INFORMATION

Land transport (ADR/RID)

UN number 3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS 60-70% AROMATIC HYDROCARBONS C10-C25)
Transport hazard class(es) 9
Packing group III
Environmental hazards This product is classified as an environmental hazard.
Special precautions for user None reported.
Emergency action code 3Z
Hazard Identification Number 90

Marine transport (IMDG)

UN number 3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS 60-70% AROMATIC HYDROCARBONS C10-C25)
Transport hazard class(es) 9
Packing group III
Environmental hazards This product is not classified as a marine pollutant.
Special precautions for user None reported.

Air transport (ICAO/IATA)

UN number 3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS 60-70% AROMATIC HYDROCARBONS C10-C25)
Transport hazard class(es) 9
Packing group III
Environmental hazards This product is classified as an environmental hazard.
Special precautions for user None reported.

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SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for product

Classification, Labelling and Packaging Regulation (EC) 1272/2008
Chemicals (Hazard Information and Packaging) for Supply Regulations 2009 (CHIP 4)

Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Date of revision	26/06/2013
Reason for revision	New formulations
Sections revised	All sections revised
Key to abbreviations and acronyms	1999/45/EC EU Dangerous Preparations Directive ACGIH American Conference of Governmental Industrial Hygienists, Inc. ADR European agreement governing the international carriage of dangerous goods by road CAS No Chemical Abstracts Service Registry Number CHIP 4 Chemicals (Hazard Information and Packaging) for Supply Regulations 2009 CLP Classification, Labelling and Packaging Regulation (EC) 1272/2008 CMR Carcinogen, Mutagen, Reprotoxin DGEAC Dangerous Goods Emergency Action Code List 2009 EC ₅₀ Half maximal effective concentration EC No European Inventory of Chemical Substances number ECHA European Chemicals Agency EH40 (2005) HSE's list of Workplace Exposure Limits, as updated and amended GHS Globally Harmonised System for classification and labelling chemicals GHS06 Pictogram – Skull and crossbones GHS07 Pictogram – Exclamation mark GHS08 Pictogram – Health hazard GHS09 Pictogram – Environment HSE Health and Safety Executive (UK) kPa kilopascal LC ₅₀ Concentration of a material in air that kills 50% of the test subjects LD ₅₀ Amount of a solid or liquid material that kills 50% of test subjects LTEL Long Term Exposure Limit mg/m ³ milligrams per cubic metre NOAEL No Observed Adverse Effect Limit OECD Organisation for Economic Co-operation Information and Development OEL Occupational Exposure Limit PBT Persistent, Bioaccumulative and Toxic ppm Parts per million REACH Registration, Evaluation and Authorisation of Chemicals Regulation (EC) 1907/2006

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SECTION 16. OTHER INFORMATION

RTECS Registry of Toxic Effects of Chemical Substances
STEL Short Term Exposure Limit
TLV Threshold Limit Value
TWA Time Weighted Average
vPvB very Persistent, very Bioaccumulative

Sources of data Suppliers' Safety Data Sheets, ADR, DGEAC, RTECS, ACGIH, ECHA, EH40.

Methods used to evaluate information used for classification CLP Annex I, Annex VI.

Key to Hazard Statements in Section 3

H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H351	Suspected of causing cancer.
H373	May cause damage to organs.
H410	Very toxic to aquatic life with long lasting effects.

Key to Risk Phrases in Section 3

R20	Harmful by inhalation.
R23	Toxic by inhalation.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.
R45	May cause cancer
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.
R66	Repeated exposure may cause skin dryness or cracking.

This information is based on our present state of knowledge and is intended to describe our products from the point of view of the safety requirements. It should not be construed as guaranteeing specific properties.

Data sheet prepared by Environmental Science Limited.

CA4595

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