

**SAFETY DATA SHEET**

According to EC-directive 2001/58/EC

TRIGONOX 42S**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Product label name	tert-Butyl peroxy-3,5,5-trimethylhexanoate
Supplier Akzo Nobel Polymer Chemicals bv Stationsplein 4 PO Box 247 NL-3800 AE Amersfoort Tel.: +31-334676767	
Emergency telephone + 31 570679211 (Fax. + 31 570679801) Akzo Nobel Chemicals-Deventer-NL	
Intended use polymerization initiator.	
Date of first issue 1993/07/14	Date of last issue / Revision # 2004/03/23 / 3.00

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a substance in conformance to EC directives			
Information on hazardous ingredients			
Chemical description	tert-Butyl peroxy-3,5,5-trimethylhexanoate		
Composition / information on ingredients			
Number	% w/w	CAS-number	Chemical name
1	99.00	13122-18-4	tert-Butyl peroxy-3,5,5-trimethylhexanoate

	Annex-1 number	EC-number	Symbol(s)	Risk-phrase(s)
1		236-050-7	N O Xi	R38 R07 R51/53

3. HAZARDS IDENTIFICATION

May cause fire. Irritating to skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects Irritating to skin.
First aid
General In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation Move to fresh air, rest, half upright position, loosen clothing.
Skin Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
Eye Rinse immediately and as long as possible with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing.
Ingestion Rinse mouth with water. Do NOT induce vomiting. Call a physician immediately !
Advice to physician Symptomatic treatment is advised.

5. FIRE-FIGHTING MEASURES

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Extinguishing media Carbon dioxide, dry chemical powder, water, foam.
Unsuitable extinguishing media halones.
Special exposure hazards CAUTION: reignition may occur. Decomposition under effect of heating. If involved in a fire, it will support combustion. In case of fire and/or explosion do not breathe fumes.
Hazardous decomposition/ combustion products Carbon dioxide, 3,3,5-Trimethylhexanoic acid, tert-Butanol, Methane, Ethylene, Acetone, 2,2,4-Trimethylpentane
Protective equipment Wear suitable protective clothing. Wear self contained breathing apparatus.
Other information Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Do not breathe fumes/vapour. Avoid contact with skin. For personal protection see Section 8.
Environmental precautions Avoid release to the environment. Refer to special instructions/Safety data sheets.
Methods for cleaning up Collect as much as possible in a clean container for (preferable) reuse or disposal. Cover the remainder with inert absorbent (e.g. vermiculite) for disposal. The waste should NOT be confined.
Other information CAUTION: reignition may occur.

7. HANDLING AND STORAGE

Handling Never weigh out in the storage room. When using do not eat, drink or smoke. Do not pipet by mouth. Do not breathe fumes/vapour. Handle in well ventilated areas. Keep away from reducing agents (e.g. amines), acids, alkalis and heavy metal compounds (e.g. accelerators, driers, metal soaps). Keep product and emptied container away from heat and sources of ignition. Confinement must be avoided. Avoid contact with skin.
Fire and explosion prevention Use explosion protected equipment. Keep away from sources of ignition - No smoking.
Storage requirements Store in accordance with local/national regulations. Keep away from food, drink and animal feedingstuffs. Store in a dry well ventilated place away from sources of heat and direct sunlight. Keep only in the original container. Keep container upright to prevent leakage.
Storage Avoid temperatures below -20 °C. If product freezes or separates, contact Akzo Nobel. For maximum quality store below: 25 °C. For safety, store below 25 °C.
Other information It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded. Wash hands thoroughly after handling or contact. Keep working clothing separately and do not take them home.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls Explosion proof ventilation recommended. Ensure good ventilation and local exhaustion of the working area.
Exposure limits No exposure limit has been established
Personal protection Respiratory The usual precautionary measures for handling chemicals should be observed.



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Hand	Wear suitable protective gloves of neoprene or synthetic rubber.
Eye	Wear eye/face protection.
Skin and body	Wear suitable protective clothing.
Other information	Launder clothes before reuse.

In this country no exposure limit has been established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Colour	clear
Odour	characteristic (mild)
Boiling point/range	Do not distill (Decomposes)
Melting point/range	< -30 °C
Flash point	Above the SADT value
Flammability	not determined
Autoignition temperature	Test method not applicable. (See Section 7)
Explosive properties	no
Explosion limits	not applicable
Oxidizing properties	not applicable
Vapour pressure	not determined
Density	897 kg/m ³ (20 °C)
Bulk density	not applicable
Solubility in water	Partly miscible with water.
Solubility in other solvents	Partly miscible with aliphatic solvents
pH value	weak acid
Partition coefficient n-octanol/water	not determined
Relative vapour density (air=1)	not determined
Viscosity	10 °C : 8 mPa.s 20 °C : 5 mPa.s.
Active oxygen content	6.73 % min.
Peroxide content	97.0 % min.
Autoignition temperature	Test method not applicable. (See Section 7)
SADT	55 °C. See also Section 10.
Explosion limits	not applicable
Specific conductivity	not determined

10. STABILITY AND REACTIVITY

Stability	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the following temperature: 55 °C. Contact with incompatible substances can cause decomposition at or below the SADT 55 °C.
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Conditions to avoid	
	Avoid temperatures below -20 °C.
	To maintain quality store in original closed container below: 25 °C.
	Confinement must be avoided.
Incompatibilities	
Avoid contact with rust, iron and copper. Contact with incompatible materials such as acids, alkalis, heavy metals and reducing agents will result in hazardous decomposition. Do not mix with peroxide accelerators. Use only Stainless steel 316, PVC, polyethylene or glass-lined equipment.	
Decomposition	
3,3,5-Trimethylhexanoic acid, tert-Butanol, Methane, Ethylene, Acetone, 2,2,4-Trimethylpentane	
Other information	
Emergency procedures will vary depending on conditions. The customer must have an emergency response plan in place. Contact Akzo Nobel for assistance with developing an emergency response plan.	

11. TOXICOLOGICAL INFORMATION

tert-Butyl peroxy-3,5,5-trimethylhexanoate	
Acute toxicity	
Oral LD50	rat:> 5000 mg/kg
Dermal LD50	rat:> 2000 mg/kg
Inhalation LC50	rat:> 0.8 mg/l ; 4 hours exposure time max. attainable concentration
Irritation	
Skin	Moderately irritating - Severely irritating
Eye	Mildly irritating
Genotoxicity	Ames test: Not mutagenic
Name	tert-Butyl peroxy-3,5,5-trimethylhexanoate

12. ECOLOGICAL INFORMATION

tert-Butyl peroxy-3,5,5-trimethylhexanoate	
Ecotoxicity	
Name	tert-Butyl peroxy-3,5,5-trimethylhexanoate
fish	Acute toxicity, (Oncorhynchus mykiss.) 96h-LC50 = 7.0 mg/l. - No Observed Effect Concentration (NOEC) = 3 mg/l
Fate	
Degradation Biotic	Inherently biodegradable (Closed bottle test).

13. DISPOSAL CONSIDERATIONS

Product	Waste disposal in accordance with regulations (most probably controlled incineration).
Contaminated packaging	According to local regulations.
Other information	For further advice contact manufacturer.

14. TRANSPORT INFORMATION

<i>Land transport (ADR/ RID)</i>	
ADR class	5.2
ADR Classification Code	P1

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RID class	5.2
TREM-Card	CEFIC TEC(R)- 52GP1-L
UN number	3105
Proper Shipping Name	Organic peroxide type d, liquid; (tert-Butyl peroxy-3,5,5-trimethylhexanoate.)
Other information	Label(s); 5.2
<i>Sea transport (IMDG-code/ IMO)</i>	
Class	5.2
Packing group	II
UN number	3105
EMS	F-J, S-R
Marine pollutant	no
Proper Shipping Name	Organic peroxide type d, liquid; (tert-Butyl peroxy-3,5,5-trimethylhexanoate)
Other information	Label(s); 5.2
<i>Air transport (ICAO-TI/ IATA-DGR)</i>	
UN number	3105
Class	5.2
Proper Shipping Name	Organic peroxide type d, liquid; (tert-Butyl peroxy-3,5,5-trimethylhexanoate)
Other information	Label(s); 5.2
Other information	The control temperature is the maximum temperature at which the formulation can be transported safely during a prolonged period of time.

15. REGULATORY INFORMATION

Chemical description tert-Butyl peroxy-3,5,5-trimethylhexanoate
Labelling according to EC directives
EC-number See section 2

R(isk) phrase(s)	
Code	Description
R07.	May cause fire.
R38.	Irritating to skin.
R51/53.	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S(afety) phrase(s)	
Code	Description
S03/07.	Keep container tightly closed in a cool place.
S14B.	Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps).
S26.	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39.	Wear suitable protective clothing, gloves and eye/face protection.




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S50D.	Do not mix with peroxide-accelerators or reducing agents.
S61.	Avoid release to the environment. Refer to special instructions/Safety data sheets.

Symbol(s)			
			
DANGEROUS FOR THE ENVIRONMENT (N)	OXIDIZING (O)	IRRITANT (Xi)	
Other information Substance and/or product listed in Directive 96/82/EC.			

16. OTHER INFORMATION

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

R-pharse information		
Chemical name	Risk-pharse(s)	
tert-Butyl peroxy-3,5,5-trimethylhexanoate	R38 R07 R51/53	Irritating to skin May cause fire Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

History	
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