

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

#### 1.1. Product identifier

Commercial Product name: **Triasorb M.**

#### 1.2. Use of the substance/preparation

H<sub>2</sub>S and mercaptans scavenge.

#### 1.3. Details of the supplier of the Safety Data Sheet

##### Identification of the company

Company: Limited Liability Company **Sintez OKA**

Address: 606000, Russian Federation, Nizhny Novgorod region, Dzerzhinsk,  
East industrial area Chimmash, 7<sup>th</sup> km of East road, building 547.

#### 1.4. Emergency telephone number

(8313) 27-25-65 7:30am – 4:15pm, (8313) 27-25-80 round-the-clock

Fax: (8313) 27-25-72

Language of the phone service – Russian.

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1. GHS Classification of the substance or mixture

Acute toxicity: Category 4 (oral).

Skin corrosion: Category 1C.

Eye Damage: Category 1.

Skin sensitization: Category 1A

Specific target organ toxicity - repeated exposure: Category 2

#### 2.2 Label elements



Hazard pictograms :

Signal word: **Danger.**

##### Hazard statements:

H302: Harmful if swallowed.

H317: May cause an allergic skin reaction.

H314: Causes severe skin burns and eye damage.

H373: May cause damage to organs through prolonged or repeated exposure.

##### Precautionary statements:

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P501: Dispose of contents/container to hazardous or special waste collection point.

#### 2.3. Other hazards

Combustible liquid.

### 3. COMPOSITION/INFORMATION ON INGREDIENT

Identification name (ES name, IUPAC name)	CAS number	EC Number	Weight % content (or range)
1,3,5-Trimethylhexahydro-1,3,5-triazine (hexahydro-1,3,5-trimethyl-1,3,5-triazine; 1,3,5-trimethyl-1,3,5-triazinane)	108-74-7	203-612-8	42-55
Water	7732-18-2	231-791-2	45-58

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**4.1.1 Following inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention/advice.

**4.1.2 Following skin contact:** Immediately flush skin with running water for 30 minutes or until no traces remain. Wash with soap and water. Remove contaminated clothing immediately. If skin irritation persists, call a physician

**4.1.3 Following eye contact:** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 30 minutes. Seek immediate medical attention/advice.

**4.1.4 Following ingestion:** Never give anything by mouth to an unconscious person. If victim is conscious: rinse mouth, drink 1 or 2 glasses of water. Do not induce vomiting. Seek immediate medical attention/advice.

#### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and in section 11. Further symptoms are possible.

### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media:

**Suitable extinguishing media:** Foam, Carbon dioxide, Dry powder, Other extinguishing agent suitable for Class B fires. For large fires, use water spray or fog, thoroughly drenching the burning material. Water mist may be used to cool closed containers.

**Unsuitable extinguishing media:** High volume water jet.

#### 5.2 Special hazards arising from the substance or mixture:

Combustible Liquid.

May form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition.

**Hazardous combustion products:** May evolve oxides of carbon (COx), oxides of nitrogen (NOx), formaldehyde, amines under fire conditions.

#### 5.3 Advice for firefighters:

Wear self-contained breathing apparatus and chemical-protective clothing.

Do not approach to burning containers. Cool the containers with water from the maximum possible distance.

#### 5.4 Additional information:

In case of fire, stop leak if safe to do so.

Evacuate personnel to safe areas.

Keep product and empty container away from heat and sources of ignition.

Cool containers / tanks with water spray.

Do not allow run-off from fire fighting to enter drains or water courses.

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures:

##### 6.1.1 For non-emergency personnel:

**Protective equipment:** Avoid contact with the skin, eyes and clothing. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

**Emergency procedures:** Restrict access to area as appropriate until clean-up operations are complete. Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Remove sources of ignition. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities. Keep people away from and upwind of spill/leak.

**6.1.2 For emergency responders:**

**Personal protective equipment:** Self-contained breathing apparatus and chemical-protective clothing.

**6.2 Environmental precautions:**

Do not discharge into drains/surface waters/groundwater.

If drains, streams, soil or sewers become contaminated, notify local authority.

**6.3 Methods and material for containment and cleaning up:**

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

**7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling:**

**7.1.1 Protective measures:**

**Measures to prevent fire:** Combustible liquid. Ensure all containers are labeled. Do not use, store, spill or pour near heat, sparks or open flame. No smoking.

**Measures to prevent aerosol and dust generation:** Ensure thorough ventilation of store and work areas. Use with adequate ventilation. Do not breathe vapors/gases/dust.

**Measures to protect the environment:**

Hermeticity of equipment, product storage tanks, containers.

**7.1.2 Advice on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice.

When handling this product never eat, drink or smoke.

Do not get in eyes, on skin, on clothing. Do not take internally. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

Laundry contaminated clothing before reuse.

Always wash thoroughly after handling chemicals.

**7.2 Conditions for safe storage, including any incompatibilities:**

Segregate from strong acids and oxidizing agents.

Store in suitable labeled containers.

Store the containers tightly closed.

Store away from heat and sources of ignition.

Have appropriate fire extinguishers available in and near the storage area.

Connections must be grounded to avoid electrical charges.

Storage duration: 12 Months.

Data on the storage life specified in the safety data are not a contractual guarantee of the properties of the product.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Chemical Name (ES name, IUPAC name)	ACGIH TLV	OSHA PEL
1,3,5-Trimethylhexahydro-1,3,5-triazine (hexahydro-1,3,5-trimethyl-1,3,5-triazine; 1,3,5-trimethyl-1,3,5-triazinane)	Not listed	None Established
Water	N/A	None Established

## 8.2 Exposure controls:

The full range of specific risk management measures to be taken during use in order to minimise worker and environmental exposure.

### 8.2.1 Appropriate engineering controls:

Hermeticity of equipment, product storage tanks, containers.

Ensure thorough ventilation of store and work areas.

Periodically control the content of harmful substances in the air of the working zone.

Handle in accordance with good industrial hygiene and safety practice.

Laboratory samples should be handled in a fume hood.

### 8.2.2 Personal protective equipment:

#### 8.2.2.1 Eye protection:

Tightly fitting safety goggles (splash goggles).

Ensure that eyewash stations and safety showers are close to the workstation location.

#### 8.2.2.2 Skin protection:

##### Hand protection:

Chemical resistant protective gloves.

Suitable materials also with prolonged, direct contact.

Manufacturer's directions for use should be observed because of great diversity of types.

##### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit.

#### 8.2.2.3 Respiratory protection:

Avoid breathing vapors or mists.

In case of insufficient ventilation, wear suitable respiratory equipment.

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace in accordance with local and national regulations.

Wear respiratory protection:

- a respirator with filter for organic vapor;
- in case of higher concentration wear a positive-pressure supplied-air respirator with full facepiece or self-contained breathing apparatus

### 8.2.3 Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Results
<i>Physical State:</i>	liquid
<i>Colour:</i>	From colorless to dark yellow color
<i>Odour:</i>	amine-like
<i>pH value:</i>	9-11
<i>Boiling point:</i>	(100 % solution) 149 °C (102,6 kPa) / 300 °F
<i>Flash point:</i>	(70 – 88) °C / (158 – 190) °F
<i>Viscosity:</i>	13 mPa s at 20 °C (42 %)
<i>Partitioning coefficient n-octanol/water:</i>	log Pow = 0,76
<i>Water solubility:</i>	soluble
<i>Oxidizing Properties:</i>	The substance or mixture is not classified as oxidizing.
<i>Melting point:</i>	lower - 30 °C / < lower - 22 °F
<i>Density:</i>	1,00-1,03 g/cm <sup>3</sup> (20 °C)
<i>Flammability:</i>	Combustible liquid. The substance or mixture is not classified as pyrophoric.

## 10 STABILITY AND REACTIVITY

### 10.1 Reactivity:

Stable under normal conditions.

### 10.2 Chemical stability:

Product is stable when rules of storage and use are observed.

### 10.3 Possibility of hazardous reactions:

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. Hazardous polymerization will not occur.

### 10.4 Conditions to avoid:

Heat and sources of ignition including static discharges.

### 10.5 Incompatible materials:

Materials to avoid: strong acids and oxidizing agents.

### 10.6 Hazardous decomposition products:

Carbon monoxide, carbon dioxide, nitrogen oxides, smoke, formaldehyde, amines.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on the likely routes of exposure

Eye Contact	Corrosive to eyes. Causes eye burns. Vapors may cause severe irritation and conjunctivitis with possible cornea edema.
Skin Contact	Corrosive to skin. Causes skin burns. May cause sensitization by skin contact.
Inhalation	Inhalation may cause severe damage mucous membrane and respiratory irritation, shortness of breath and pulmonary edema.
Ingestion	Ingestion may cause burns of the gastrointestinal tract, nausea, vomiting, and diarrhea. May be harmful if swallowed.

### 11.2 Chronic Effects

May cause damage to organs through prolonged or repeated exposure. (Stomach/intestinal disorders. Eyes. ).

### Aggravated Medical

**Conditions** Respiratory disorders. Skin disorders. Eye disease.

### 11.3 Information on toxicological effects

#### 11.3.1 Acute toxicity (Information on: 1,3,5-Trimethylhexahydro-1,3,5-triazine):

	Effect dose	Method	Remark
Acute oral toxicity	LD 50: 500 mg/kg	Rat, OECD Guideline 423 (Acute Oral Toxicity)	
Acute dermal toxicity	Not required	—	Study scientifically unjustified
Acute inhalative toxicity	Not required	—	Study scientifically unjustified

### Skin corrosion / irritation:

Skin irritation / corrosion: corrosive.

### Serious eye damage/irritation:

Eye irritation: corrosive.

### Respiratory or skin sensitisation:

Sensitising.

#### 11.3.2 CMR-effects (Information on: 1,3,5-Trimethylhexahydro-1,3,5-triazine):

**Mutagenicity:** Not mutagenic in AMES Test.

**Carcinogenicity:** No data available.

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<b>Reproductive toxicity</b>	Assessment of teratogenicity: No reproductive/developmental toxicity was observed at any dose level.
<b>Specific target organ toxicity (single exposure)</b>	STOT Rep. Exp. 2 (H373: May cause damage to organs through prolonged or repeated exposure). Affected organs: Eyes (degeneration of retina). Route of exposure: oral.

## 12. ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity:

**Acute toxicity (Information on: 1,3,5-Trimethylhexahydro-1,3,5-triazine):**

	Effect dose	Exposure time	Species	Method	Evaluation
Acute fish toxicity	LC50	24 h	Turbot ( <i>Scophthalmus maximus</i> )	OECD 203	> 1.908 mg/L
		48 h			> 1.908 mg/L
		72 h			> 1.908 mg/L
		96 h			> 1.908 mg/L
	NOEC	96 h	1.908 mg/L		
Acute invertebrates toxicity	LC50	24 h	Acartia tonsa	Static test conditions according to SOP E207 based upon ISO TC147/SC5/WG2 protocol by Thompson (1990)	26.288 mg/L
		48 h			20.352 mg/L
Acute algae and cyanobacteria toxicity	EC50	72 h	<i>Skeletonema costatum</i>	Static test conditions according to SOP E209 based on ISO/DIS BS EN ISO 10253: 1998	1.908 mg/L (by growth rate)

### 12.2 Persistence and degradability:

Due to the results of Degradation, the substance is not persistent . The substance is readily biodegradable.

### 12.3. Bioaccumulative potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

### 12.4 Mobility:

Soluble.

## 13. DISPOSAL CONSIDERATIONS

*Waste treatment methods:*

Dispose of in accordance with local regulations.

*Contaminated packaging:*

In accordance with local and national regulations. Empty containers should be taken for local recycling, recovery or waste disposal. Empty containers retain product residue and may be hazardous.

## 14. TRANSPORT INFORMATION

<b>DOT</b>	UN number:	<b>UN 2735</b>
	Proper shipping name:	<b>Amines, liquid, corrosive, n.o.s. (1,3,5-Triazine, hexahydro-1,3,5- trimethyl-)</b>
	Hazard class:	<b>8</b>
	Packing group:	<b>III</b>
	Marine pollutant:	<b>No</b>
	Labelling:	<b>Corrosive.</b>
<b>IMDG / IMO</b>	UN number:	<b>UN 2735</b>
	Proper shipping name:	<b>Amines, liquid, corrosive, n.o.s. (1,3,5-Triazine, hexahydro-1,3,5- trimethyl-)</b>
	Hazard class:	<b>8</b>
	Packing group:	<b>III</b>
	Marine pollutant:	<b>No</b>
	Labelling:	<b>Corrosive.</b>

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Date/ revised: 15.11.2013  
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<b>IATA/</b>	UN number:	<b>UN 2735</b>
<b>ICAO</b>	Proper shipping name:	<b>Amines, liquid, corrosive, n.o.s. (1,3,5-Triazine, hexahydro-1,3,5- trimethyl-)</b>
	Hazard class:	<b>8</b>
	Packing group:	<b>III</b>
	Labelling:	<b>Corrosive.</b>
<b>ADR/RID</b>	UN number:	<b>UN 2735</b>
	Proper shipping name:	<b>Amines, liquid, corrosive, n.o.s. (hexahydro-1,3,5-trimethyl-1,3,5- triazine)</b>
	Hazard class:	<b>8</b>
	Packing group:	<b>III</b>
	Marine pollutant:	<b>No</b>
	Labelling:	<b>Corrosive.</b>

## 15. REGULATORY INFORMATION

### 15.1 US federal regulations :

#### OSHA HAZARD CLASSIFICATION:

This product is classified as hazardous as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200: Combustible liquid, Sensitizer, Target Organ Effects; Corrosive.

### 15.2 SARA 311/312 Hazardous Categorization

Acute Health Hazard.

Chronic Health Hazard.

Fire Hazard.

### 15.3 SARA TITLE III SECTION 313 INFORMATION:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

### 15.4 CERCLA Hazardous Substances

This product does not contain any RQs or TPQs under this regulation.

### 15.5 California Proposition 65

This product does not contain any Proposition 65 chemicals.

### 15.6 Canadian Environmental Protection Act

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

### 15.7 Regulations of the European union (Labelling) :

EC-Number: 203-612-8

Hazard determining component for labelling: HEXAHYDRO-1,3,5-TRIMETHYL-1,3,5-TRIAZINE.

**Hazard symbols, R-phrases and S-phrases for 1,3,5-Trimethylhexahydro-1,3,5-triazine are in accordance with the Directive 67/548/EEC of June 27, 1967: Hazard symbol(s):** C – corrosive.

Xn – Harmful.

R-phrases: R34; R43; R48/22.

S-phrases: S24/25; S26; S36/37/39; S45.

### Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard pictogram: GHS08: health hazard.

GHS05: corrosion.

GHS07: exclamation mark.

Signal word: Danger.

Hazard statements: H302: Harmful if swallowed.

H317: May cause an allergic skin reaction.

H314: Causes severe skin burns and eye damage.

H373: May cause damage to organs through prolonged or repeated exposure.

## 16. OTHER INFORMATION

**16.1 Key source for data:** Own data and the website of the European Chemicals Agency.

**16.2 Further information:**

**HMIS** Health 3 Flammability 2 Physical Hazard 0

**NFPA** Health 3 Fire 2 Instability 0

The information above is presented on a scrupulous basis and represents the best currently available information. No conclusions should be made based on this data concerning the quality or suitability of this product for definite application. Regulatory requirements may change and differ according to a company's location. Customer should provide compliance with state and local legal requirements.

Technical Director



A.M. Burtsev