SAFETY DATA SHEET

Creation Date 04-May-2010 **Revision Date** 19-Apr-2012 **Revision Number** 6

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

Product Identifier

Product Description: **Methyl isothiocyanate**
Cat No. **414470000; 414470250; 414471000; 414475000**
Synonyms MTC; Methyl mustard-oil

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium
E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number
For information in the US, call: 001-800-ACROS-01
For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300
CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 3
Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s) T - Toxic
N - Dangerous for the environment
R-phrase(s) R34 - Causes burns
R43 - May cause sensitization by skin contact
Risk Combination Phrases R23/25 - Toxic by inhalation and if swallowed
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

SECTION 2. HAZARDS IDENTIFICATION

Label Elements

Signal Word **Danger**

Hazard Statements

H314 - Causes severe skin burns and eye damage
H410 - Very toxic to aquatic life with long lasting effects
H331 - Toxic if inhaled
H301 - Toxic if swallowed
H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, 1272/2008)

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P273 - Avoid release to the environment

Other Hazards

Lachrymator (substance which increases the flow of tears).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Methyl isothiocyanate 556-61-6	EEC No. 209-132-5	>95	556-61-6	T; R23/25 C; R34 R43 N; R50-53	Acute Tox. 3 (H301) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Notes to Physician Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons
No information available.

Special hazards arising from the substance or mixture

Flammable. Containers may explode when heated.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental precautions

Should not be released into the environment.

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Do not breathe vapors/dust. Do not ingest. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat and sources of ignition. Corrosives area. Store under an inert atmosphere.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Methyl isothiocyanate	TWA: 0.1 mg/m^3	TWA: 0.1 mg/m^3 Skin notation			

Component	Russia - TWA	Slovak Republic	Slovenia	Sweden	Turkey
Methyl isothiocyanate	Skin notation MAC: 0.1 mg/m^3				

Biological limit values This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment

Eye Protection Goggles

Hand Protection Protective gloves

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice
Environmental exposure controls	No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Yellow-orange
odor	pungent
pH	5-7@ 20°C 5 g/l aq.sol.
Boiling Point/Range	117 - 120°C / 242.6 - 248°F@ 758 mmHg
Melting Point/Range	30 - 36°C / 86 - 96.8°F
Flash Point	32°C / 89.6°F
Autoignition Temperature	370°C
Explosion Limits	
Lower	2.5 Vol%
Upper	30 Vol%
Water Solubility	7.6 g/L (20°C)
Specific Gravity	1.069
Molecular Formula	C2 H3 N S
Molecular Weight	73.12

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Moisture sensitive.

Possibility of Hazardous Reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	None under normal processing..

Conditions to Avoid

Incompatible products, Excess heat, Avoid dust formation, Keep away from open flames, hot surfaces and sources of ignition, Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents, Strong bases, Alcohols, Amines, Ammonia.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO_2). Nitrogen oxides (NOx). Sulfur oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl isothiocyanate	72 mg/kg (Rat)	2780 mg/kg (Rat) 33 mg/kg (Rabbit)	1900 mg/m³ (Rat) 1 h

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization May cause sensitization by skin contact
Mutagenic Effects No information available
Reproductive Effects No information available.
Developmental Effects No information available.
Target Organs Respiratory system Eyes Skin Gastrointestinal tract (GI)
Other Adverse Effects See actual entry in RTECS for complete information
Endocrine Disruptor Information None known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methyl isothiocyanate		LC50: 0.078 mg/L/96h (Oncorhynchus mykiss)		EC50: 0.18-0.56 mg/L/48h (Daphnia)

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Component	log Pow
Methyl isothiocyanate	0.94

Mobility in soil

No information available.

Results of PBT and vPvB assessment

Other adverse effects

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	UN2477
Hazard Class	6.1
Subsidiary Hazard Class	3
Packing Group	I
Proper Shipping Name	METHYL ISOTHIOCYANATE

ADR

UN-No	UN2477
Hazard Class	6.1
Subsidiary Hazard Class	3
Packing Group	I
Proper Shipping Name	METHYL ISOTHIOCYANATE

IATA

UN-No	UN2477
Hazard Class	6.1
Subsidiary Hazard Class	3
Packing Group	I
Proper Shipping Name	METHYL ISOTHIOCYANATE , FORBIDDEN FOR IATA TRANSPORT

SECTION 15. REGULATORY INFORMATION

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

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Methyl isothiocyanate	209-132-5	-		X	X	-	X	X	-	X	X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
CHINA - China Inventory of Existing Chemical Substances
AICS - Inventory of Chemical Substances
KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
R34 - Causes burns
R43 - May cause sensitization by skin contact
R23/25 - Toxic by inhalation and if swallowed
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Revision Date 19-Apr-2012
Revision Summary
Reason for revision (M)SDS sections updated, 14.
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
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End of Safety Data Sheet