SAFETY DATA SHEET

1. Identification

Product identifier **TRIM® 229**

Other means of identification None.

Recommended use Metal Working Fluids.

Recommended restrictions Applicable for industrial settings only. No other uses are advised.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Master Chemical Corporation

Address 501 West Boundary Street
Perrysburg, Ohio 43551-1200
United States

Telephone 419-874-7902

Website www.masterchemical.com

E-mail info@masterchemical.com

Emergency phone number CHEMTREC 1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Not classified
Acute toxicity, dermal	Not classified
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes skin irritation. Causes serious eye irritation.

Precautionary statement

Prevention Wash hands thoroughly after handling. Wear eye protection/face protection. Wear protective gloves.

Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
MONOETHANOLAMINE		141-43-5	20 - < 30

Chemical name	Common name and synonyms	CAS number	%
TRIETHANOLAMINE		102-71-6	20 - < 30
TRADE SECRET*		Proprietary*	3 - < 5
Other components below reportable levels			40 - < 50

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air.

Skin contact Wash affected area with mild soap and water.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

Ingestion In the unlikely event of swallowing contact a physician or poison control center.

Most important symptoms/effects, acute and delayed None known.

General information Get medical attention, if needed.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical, CO2, water spray or alcohol resistant foam. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical No unusual fire or explosion hazards noted.

Special protective equipment and precautions for firefighters Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures For personal protection, see section 8 of the SDS. Keep unnecessary personnel away. Use personal protective equipment as required.

Methods and materials for containment and cleaning up Soak up with inert absorbent material. Clean up in accordance with all applicable regulations.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Do not taste or swallow. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities Store in a closed container. The product is stable and non-reactive under normal conditions of use, storage and transport. Store in a dry place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	PEL	6 mg/m3
		3 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards Components	Type	Value
		6 ppm
	TWA	8 mg/m3
		3 ppm

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Color Colorless

Odor Mild, ammonical

Odor threshold Not available.

pH 11 - 11.4

Melting point/freezing point < -11.2 °F (< -24 °C)

Initial boiling point and boiling range 212 °F (100 °C)

Flash point > 212.0 °F (> 100.0 °C)

Evaporation rate < 1 BuAc

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Soluble

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Flash point class ASTM D92-90

pH in aqueous solution 8.5 - 9

Specific gravity 1.06 - 1.172

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Stable at normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines.

Incompatible materials Powerful oxidizers. Strong acids.

Hazardous decomposition products To avoid thermal decomposition, do not overheat.

11. Toxicological information

Information on possible routes of exposure

Inhalation No adverse effects due to inhalation are expected.

Skin contact May be irritating to the skin.

Eye contact May be irritating to eyes.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics May be irritating to the skin. May be irritating to eyes.

Information on toxicological effects

Acute toxicity Not classified.

Product	Species	Test Results
TRIM® 229		
Acute		
Dermal		
LD50	Rabbit	> 2, g/kg
Inhalation		
LC50	Rat	> 212, mg/l
Oral		
LD50	Rat	> 2000, mg/kg

Skin corrosion/irritation May be irritating to the skin.

Serious eye damage/eye irritation May be irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization Classification not possible. Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Classification not possible.

Specific target organ toxicity - repeated exposure Classification not possible.

Aspiration hazard Classification not possible. Not an aspiration hazard.

Chronic effects None known.

12. Ecological information

Ecotoxicity Not available.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Follow precautions for safe handling described in this safety data sheet.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

15. Regulatory information

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	06-17-2015
Version #	01
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