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		SDS No	01.168.01

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

Product name: thermal plate developer LITE PLUS

Intended use: Plate Chemicals

Company Information: KIARANG SANAT CO.
3rd floor, No. 61, Miremad st. Beheshti ave.
Tehran 1587853543, Iran

Phone numbers to call for information: +98 21 88752931
in case of emergency

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.



Hazard pictograms:

Signal words: Caustic

Hazard statements:

H314: Causes severe skin burns and eye damage

Precautionary statements:

P264 Wash ... thoroughly after handling.

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

P337+313 Get medical advice/attention.

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P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P332+313 IF skin irritation occurs: Get medical

advice/attention P362 Take off contaminated clothing and wash before reuse

2.3. Other hazards.

Based on available data, the product does not contain more than 0.1 percent PBT or vPvB.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Information not relevant.

3.2. Mixtures

Name	Cas No	Conc.range	Symbol	H phrases
Sodium metasilicate pentahydrate	10213-79-3	10-25 %	GHS05	H314
Other		75-90 %		

4. FIRST AID MEASURES

4.1. Description of first aid measures

General: In the event of an accident call for emergency assistance and follow the information on the label or on the information sheet. Create a protective first aid team.

Eyes : Clean your eyes for at least 15 minutes under running water. Consult an ophthalmologist.

Skin: Remove contaminated clothing. Wash with plenty of soap and water. Get medical assistance / intervention..

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Ingestion: In any case, seek medical attention. Do not induce vomiting for plenty of water to dilute the material in the digestive tract. If the patient is unconscious, do not give anything by mouth.

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

Specific information on symptoms and effects caused by the product are unknown. For symptoms and effects caused by the contained substances, see chap. 11.

4.3. Indication of any immediate medical attention and special treatment needed

For symptoms and effects caused by the contained substances, see chap. 11.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing Media: CO₂, dry chemical powder

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water.

Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

If a large amount of product is involved in the fire, they may worsen significantly. It produces toxic fumes when burned. It is forbidden to breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

In the case of fire, use jets of water to cool the containers to prevent the risk of explosions (product decomposition and excess pressure) and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Remove all containers containing the product from the fire, if it is safe to do so.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate the sewage system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

If it is released in large quantities, notify the local authorities immediately.

Collect the material in a container that is compatible with the material, close the lid, and label it.

Accumulate the stored product in a safe and isolated area.

To dispose of the material, follow the rules described in section 13.

In case of small spills (<1 barrel), allow the wastes to evaporate or absorb with a suitable absorbent material and dispose of safely. Remove contaminated soil and dispose of it safely.


For large spills (> 1 barrel), transport to a recovery tank with mechanical means, such as a vacuum tractor, for recovery or safe disposal. Do not wash residues with water. Allow residues to evaporate or soak up with a suitable absorbent material and dispose of safely. Remove contaminated soil and dispose of it safely.

Use tools made of materials compatible with the material. Do not smoke, eat or drink in the area of production.

Make sure that the product does not splash during operation. Do not breathe and swallow.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

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7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not breathe gas/fumes/ vapor/spray. Do not eat, drink or smoke during use.

Remove any contaminated clothes and personal protective equipment before entering places in which people eat. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details. Avoid all possible sources of ignition (spark or flame).

7.3. Specific end use(s)

Information not available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Regulatory References

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	TLV-ACGIH	ACGIH 2016

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8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN

166). RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Liquid, clear
Odour:	Characteristic
pH:	12-14
Conductivity:	80-90 mS/cm
Melting point / freezing point:	Not available.
Initial boiling point:	>100 °C
Boiling range:	Not available.
Flash point:	Not available.
Vapour pressure:	Not available.
Density:	1,15-1,20 g/ml.
Solubility:	Soluble in water
Refractive index:	Not available.
Explosive properties:	No.
Oxidising properties:	No.

9.2. Other information

Information not available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

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10.2. Chemical stability

The product is stable in normal conditions of use and storage

10.3. Possibility of hazardous reactions

Harmful reactions under normal conditions of use and storage are not foreseeable

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

Materials to avoid: Strong oxidizing agents. Strong acids.

10.6. Hazardous decomposition products

Emits toxic smoke during combustion.

11. TOXICOLOGICAL INFORMATION

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

ACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture: Not classified (no significant component).

LC50 (Inhalation - mists / powders) of the mixture: Not classified (no significant

component). LD50 (Oral) of the mixture: Not classified (no significant component).

LD50 (Dermal) of the mixture: Not classified (no significant

component). SKIN CORROSION / IRRITATION

May cause skin irritation in contact with skin.

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SERIOUS EYE DAMAGE / IRRITATION

May be irritated and itching.

RESPIRATORY OR SKIN

SENSITIVITY.

Does not meet the classification criteria for this hazard

class. GERM CELL MUTAGENICITY.

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY.

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY.

Does not meet the classification criteria for this hazard

class. STOT - SINGLE EXPOSURE.

Does not meet the classification criteria for this hazard

class. STOT - REPEATED EXPOSURE.

Does not meet the classification criteria for this hazard class.

ASPIRATION HAZARD.

Does not meet the classification criteria for this hazard class.

12. ECOLOGICAL INFORMATION

Use this product according to good working practices. Avoid trash. If the product reaches water channels or contaminates soil or vegetation, inform the competent authorities.


12.1. Toxicity

Information not available..

12.2. Persistence and degradability

Information not available.

12.3. Bioaccumulative potential

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Information not available.

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6 Other adverse effects

Information not available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Reuse if possible. Product residues should be considered as special hazardous waste. The hazard level of wastes containing this product should be evaluated according to the applicable regulations.

Disposal must be carried out by an authorized waste management company in accordance with national and local regulations.

Waste transport is subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. TRANSPORT INFORMATION

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The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN Number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging Group

Not applicable.

14.5. Environmental Hazards

Not applicable

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant.

15. REGULATORY INFORMATION

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

Seveso Category - Directive 2012/18/EC: E1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006. None.

Substances in Candidate List (Art. 59

REACH). None.

Substances subject to authorisation (Annex XIV

REACH). None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

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None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

Regulation on the classification, packaging and labeling of dangerous substances and medicinal products

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other

substances or materials, the details stated in this document cannot be conferred to the resultant new product unless

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